

FOUNDED IN 1886

# RAILWAY AGE

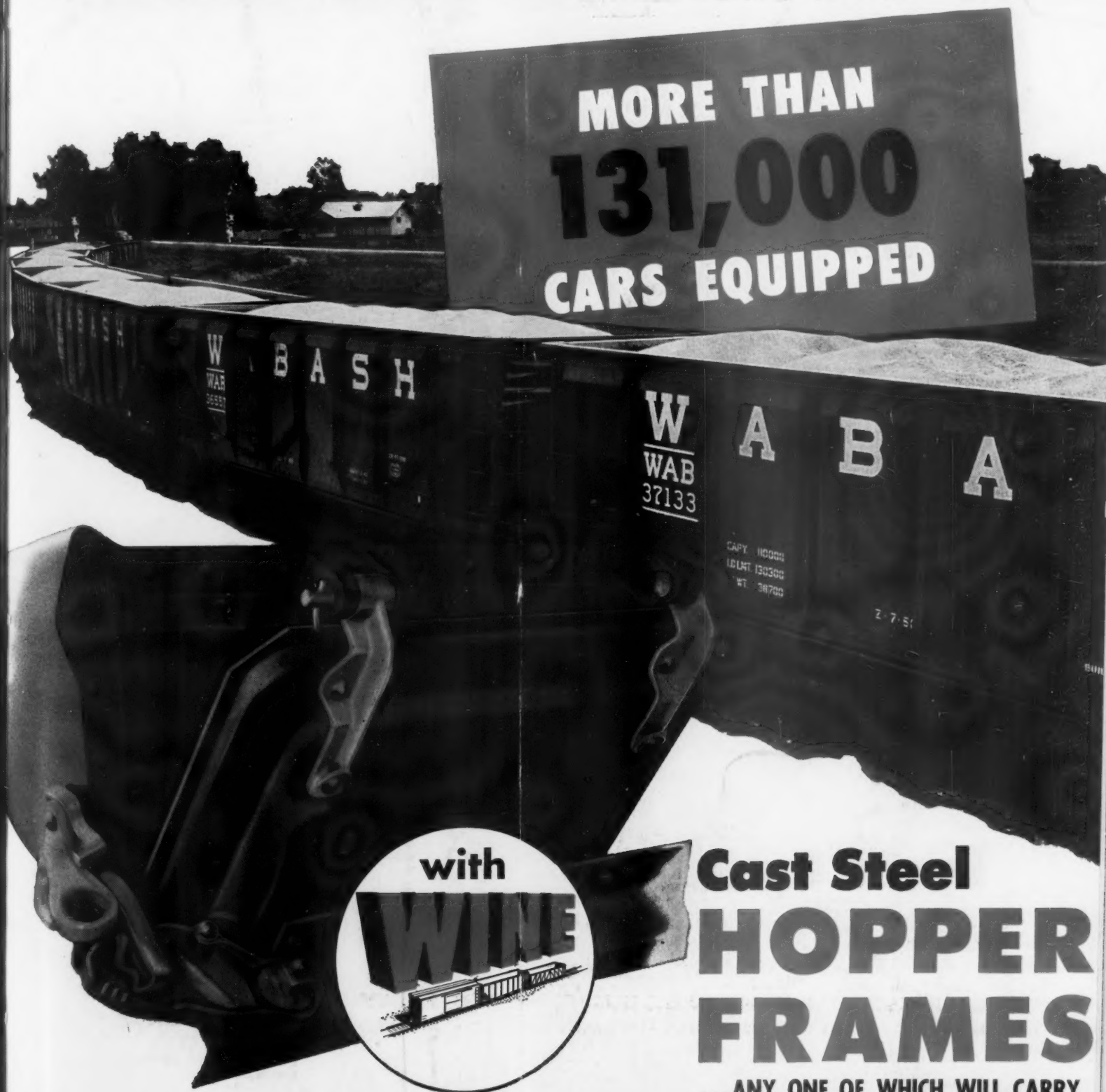
THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY



10  
26  
51  
1

AUGUST 13, 1951

MORE THAN  
**131,000**  
CARS EQUIPPED



with



**Cast Steel  
HOPPER  
FRAMES**

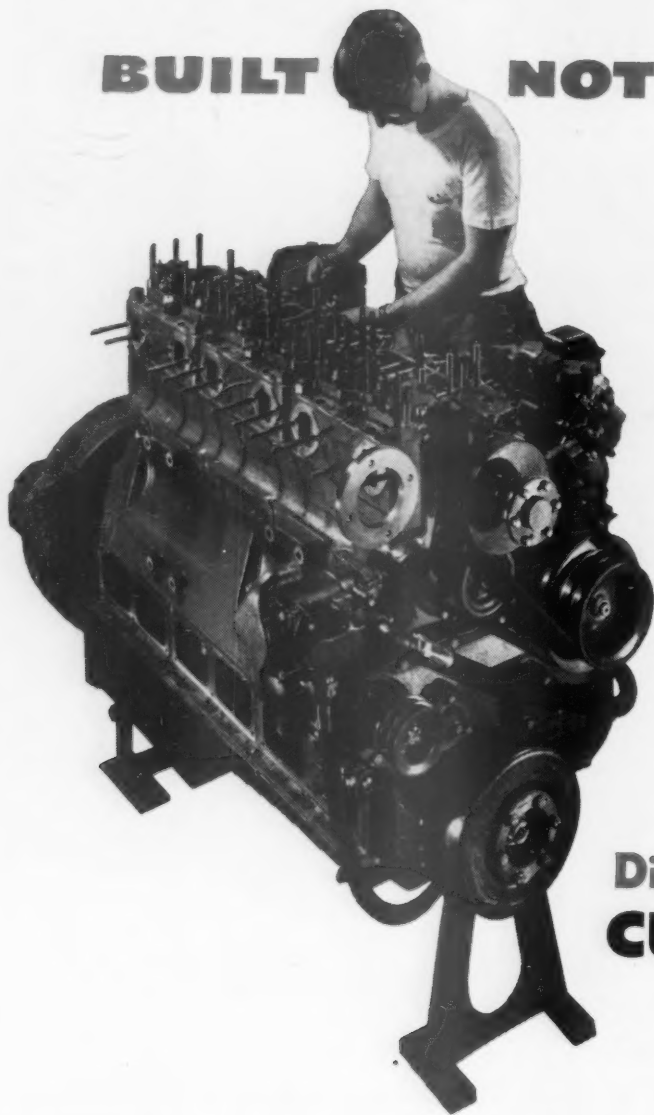
...ANY ONE OF WHICH WILL CARRY  
GRAIN WITHOUT LOSS OF LADING!

THE WINE RAILWAY APPLIANCE CO. TOLEDO 9, OHIO

# Cummins® CUSTOM BUILT Diesels



**BUILT NOT ONCE BUT TWICE**



Each rugged, lightweight *and* high-speed Cummins Diesel is actually built *twice*. It's assembled, run-in tested, disassembled . . . inspected . . . then reassembled and tested again. And each engine is custom-built to *fit the job*. Extra care in building, Cummins exclusive fuel system, efficient service and parts organization, enable users to get *less "down-time"*, *more* power and profits from Cummins Diesels. See your *Cummins Dealer*.

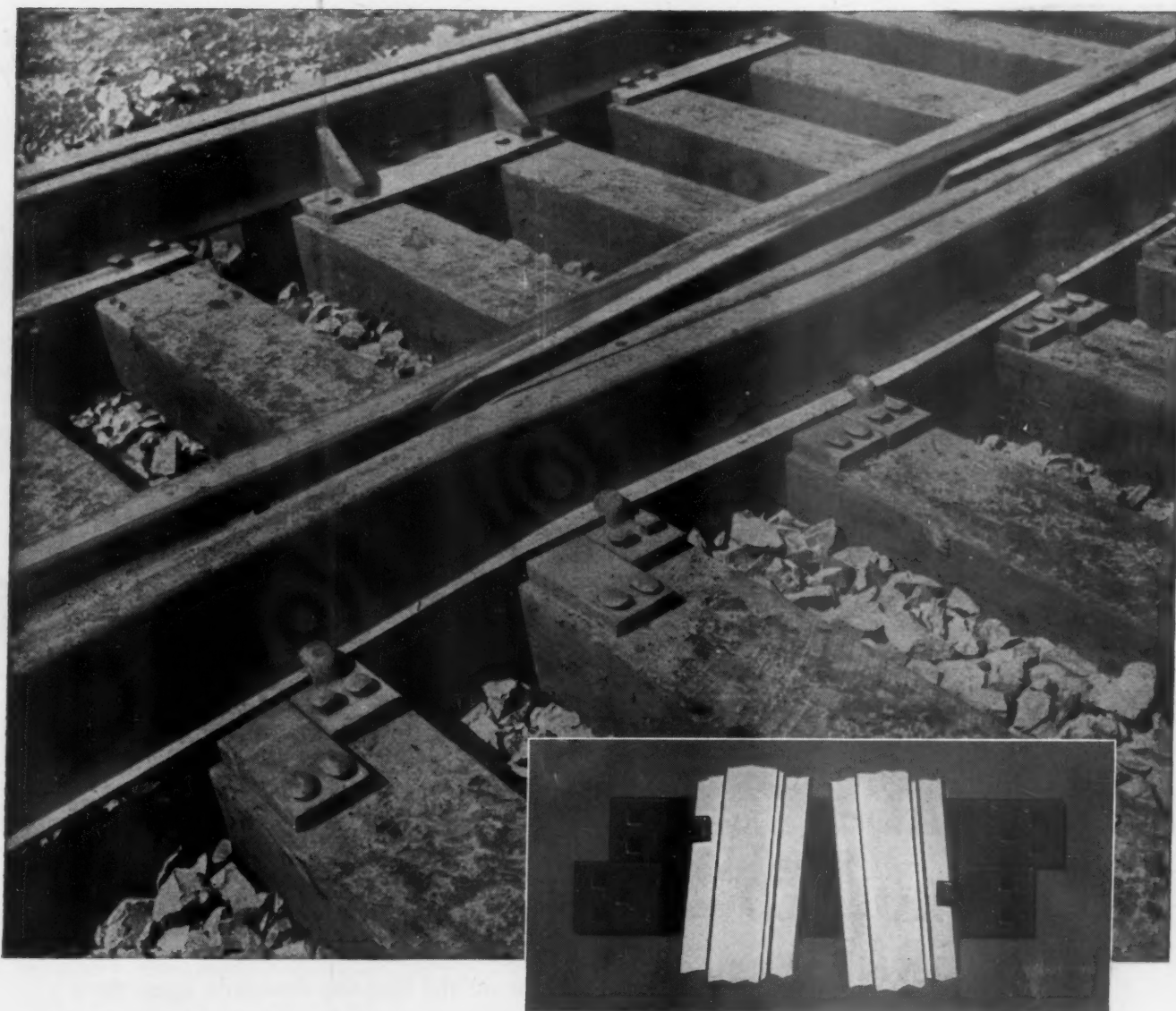
**Diesel power by  
CUMMINS**



**CUMMINS ENGINE COMPANY, INC., COLUMBUS, INDIANA**

Export: CUMMINS DIESEL EXPORT CORPORATION • Columbus, Indiana, U.S.A. • Cable: CUMDIEX

*Lightweight High-speed  
Diesel Engines (50-550 hp)  
for: on-highway trucks  
off-highway trucks • buses  
tractors • earthmovers  
shovels • cranes  
industrial locomotives  
air compressors  
logging yarders and loaders  
drilling rigs  
centrifugal pumps  
generator sets and power units  
work boats and pleasure craft*



# They're the **EASIEST** Plates to Work With

You've probably seen track men fussing around with conventional frog plates, trying to keep tabs on all the different lengths for the various tie positions. Perhaps this has struck you as a great nuisance and time-waster.

It's the kind of thing you can eliminate by furnishing Bethlehem Twin Hook Frog Plates to track crews. These plates are used in mated pairs—never singly. Any matching pair fits several different

tie positions, so that you don't need a large and confusing inventory of plates in many lengths. Study the pictures we show here. They tell you the story.

But there are other good features, too. Each plate has an integral forged hook, which is bigger and stronger than ordinary spike heads. Thrust and lifting don't bother these sturdy hooks. They can't loosen, rattle, jiggle.

Standard Twin Hook Frog Plates

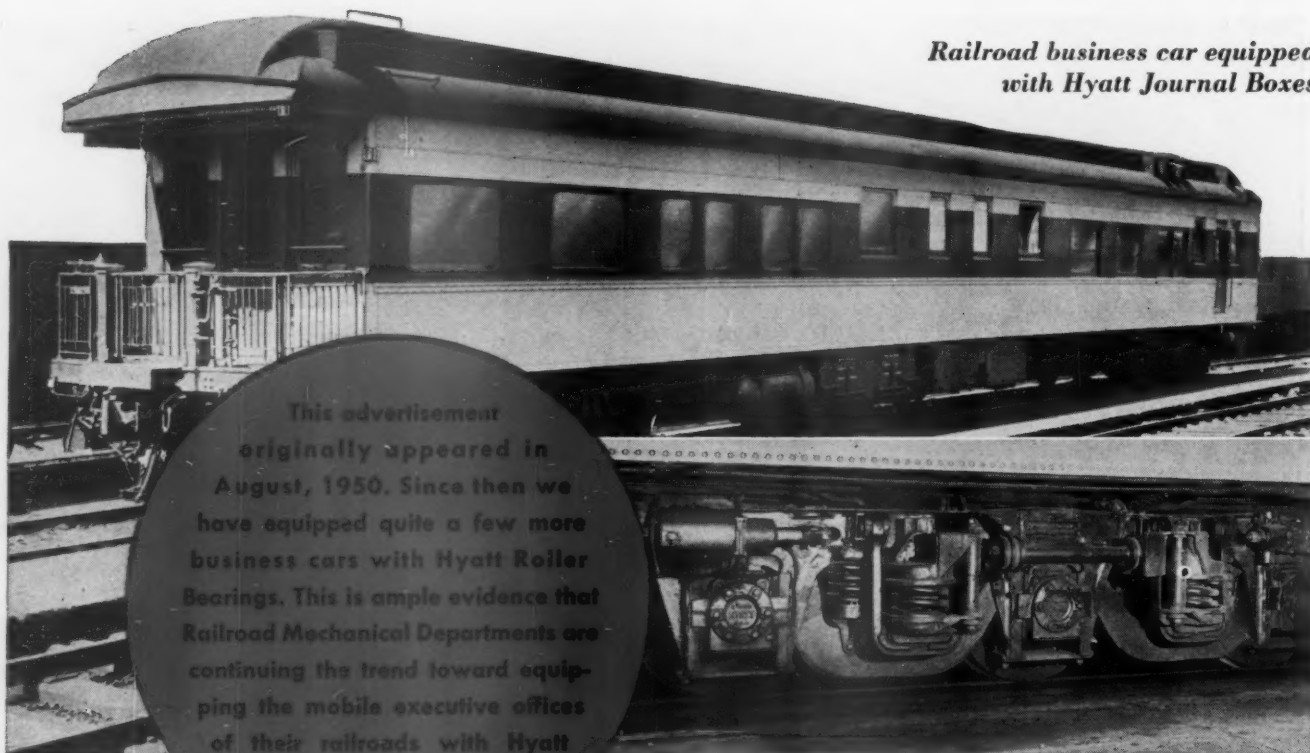
are stocked in 23-, 27-, and 31-in. lengths; reverse-hook plates, for use at heel ends, are carried in the 27-in. length only. Ask a Bethlehem man for full information or request a copy of Folder 390.

**BETHLEHEM STEEL COMPANY**  
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation





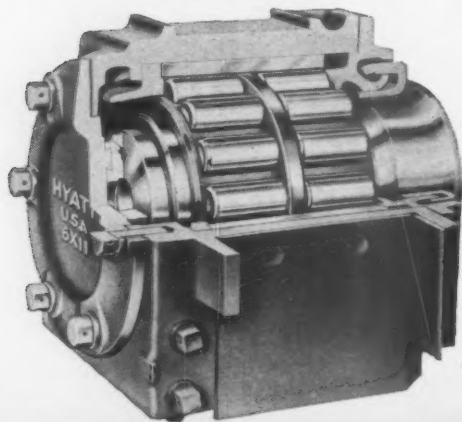


*Railroad business car equipped  
with Hyatt Journal Boxes*

This advertisement  
originally appeared in  
August, 1950. Since then we  
have equipped quite a few more  
business cars with Hyatt Roller  
Bearings. This is ample evidence that  
Railroad Mechanical Departments are  
continuing the trend toward equip-  
ping the mobile executive offices  
of their railroads with Hyatt  
Roller Bearing Journal  
Boxes.

*Six wheel, outside swing hanger truck from a  
Hyatt-equipped business car*

**FREE  
LATERAL—  
CONTROLLED  
LATERAL—  
BETTER  
RIDING**



Railroad executives must go over the lines to meet their operating men, also, they find it advantageous to visit with their shippers who provide the bulk of their traffic or freight movements.

• • •

On the line or off the line the demands upon their energy is taxing—they must keep fit and be fit.

• • •

Possibly that is one of the many reasons why the mechanical departments have equipped the traveling offices of so many busy executives with Hyatt Roller Bearing Journal Boxes in the past few years.

• • •

We can furnish boxes for any type truck—new or old and just now we are furnishing boxes for a number of additional business cars. May we help you to smooth out the travel of your executives?

• • •

Call or write Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

**HYATT ROLLER BEARING JOURNAL BOXES**



# RAILWAY AGE

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office and Trade Mark Office in Canada.



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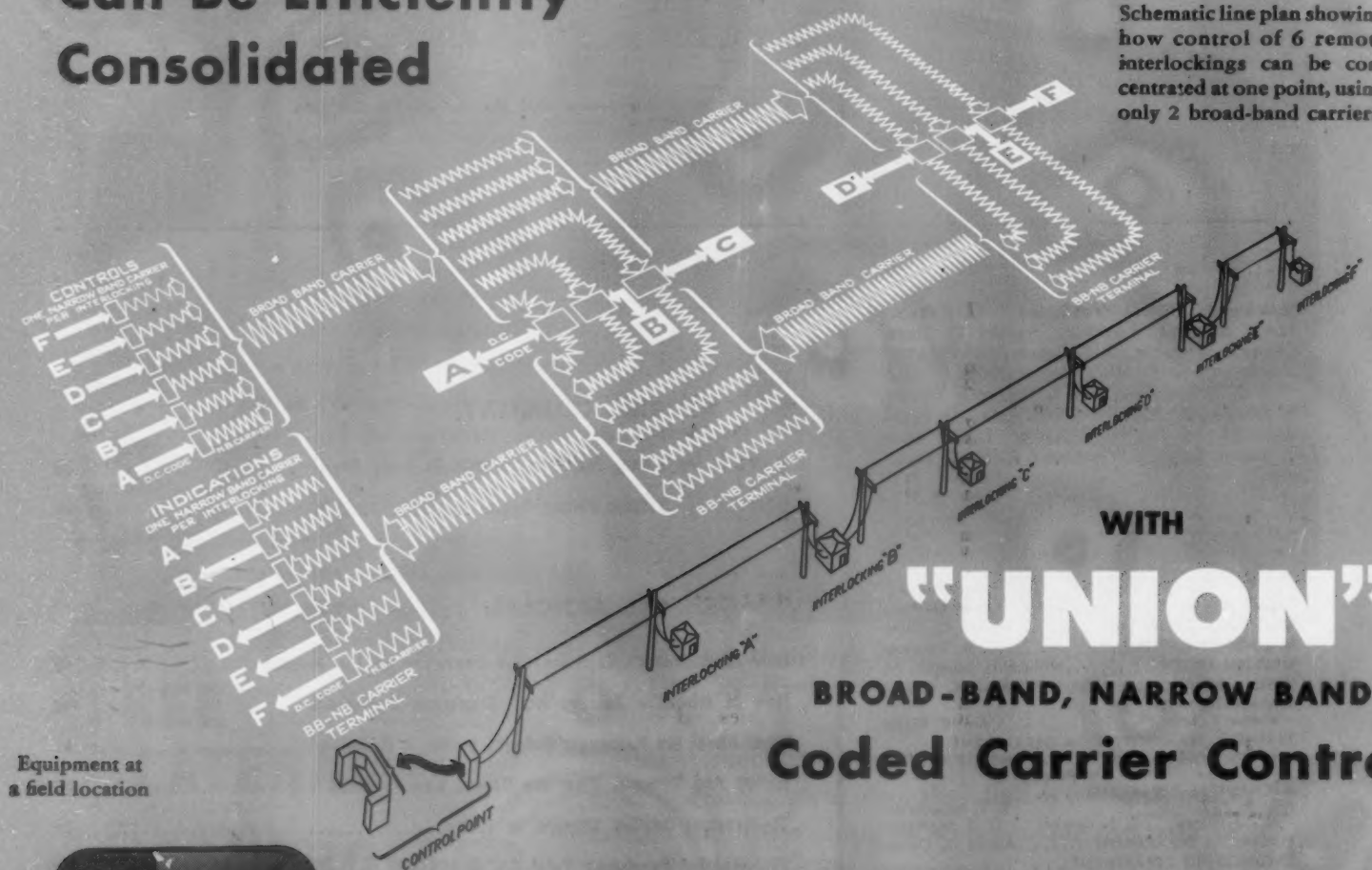
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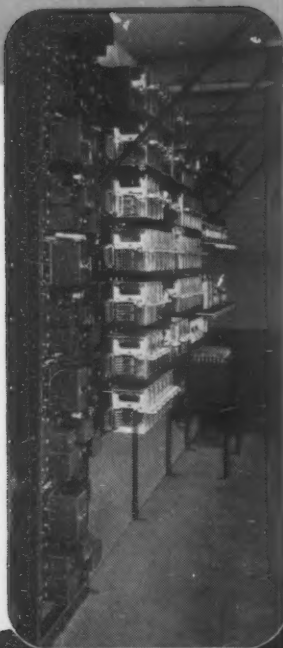
# INTERLOCKINGS

**Can Be Efficiently Consolidated**

Schematic line plan showing how control of 6 remote interlockings can be concentrated at one point, using only 2 broad-band carriers.



Equipment at a field location



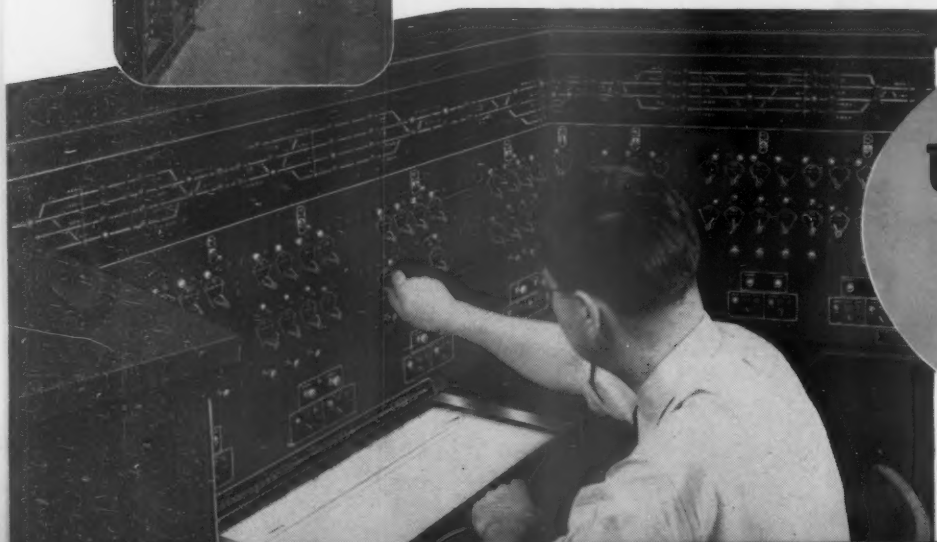
WITH  
**"UNION"**  
BROAD-BAND, NARROW BAND  
Coded Carrier Control

"Union" . . . pioneer in the use of carrier frequencies to control signal systems . . . has continuously advanced the development of Coded Carrier Control to meet new and diversified demands for this versatile system.

And now . . . with consolidated control of interlockings assuming an ever-increasing importance in the interests of efficiency and economy . . . "Union" can furnish the Broad-Band, Narrow-Band Coded Carrier Control System which is especially designed for this purpose.

It utilizes narrow-band frequencies—modulating broad-band carriers—in such a manner that the controls and indications of an extensive series of remote interlockings can be confined to a relatively narrow range of frequencies handled by a few broad-band carriers.

Our representatives will be glad to show you how you can obtain greater efficiency and save money . . . with "Union" Broad-Band, Narrow-Band Coded Carrier Control.



**UNION SWITCH & SIGNAL**

DIVISION OF WESTINGHOUSE AIR BRAKE CO.

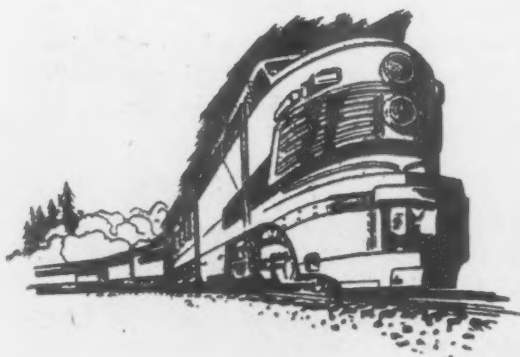
SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO  
ST. LOUIS SAN FRANCISCO

# WEEK AT A GLANCE

## CURRENT RAILWAY STATISTICS

<b>Operating revenues, six months</b>	
1951 .....	\$ 5,035,876,498
1950 .....	4,223,707,275
<b>Operating expenses, six months</b>	
1951 .....	\$ 3,975,306,446
1950 .....	3,354,141,920
<b>Taxes, six months</b>	
1951 .....	\$ 570,919,760
1950 .....	434,899,975
<b>Net railway operating income, six months</b>	
1951 .....	\$ 388,044,695
1950 .....	346,295,612
<b>Net income, estimated, six months</b>	
1951 .....	\$ 250,000,000
1950 .....	209,000,000
<b>Average price railroad stocks</b>	
August 7, 1951 .....	54.60
August 8, 1950 .....	42.42
<b>Car loadings, revenue freight</b>	
30 weeks, 1951 .....	22,909,549
30 weeks, 1950 .....	20,903,153
<b>Average daily freight car surplus</b>	
Week ended August 4, 1951 .....	6,156
Week ended August 5, 1950 .....	3,936
<b>Average daily freight car shortage</b>	
Week ended August 4, 1951 .....	18,063
Week ended August 5, 1950 .....	35,161
<b>Freight cars delivered</b>	
July 1951 .....	5,290
July 1950 .....	3,464
<b>Freight cars on order</b>	
August 1, 1951 .....	144,810
August 1, 1950 .....	67,084
<b>Freight cars held for repairs</b>	
July 1, 1951 .....	93,866
July 1, 1950 .....	123,115
<b>Average freight car turn-around time, days</b>	
June 1951 .....	14.79
June 1950 .....	14.60
<b>Average number railroad employees</b>	
Mid-June 1951 .....	1,295,045
Mid-June 1950 .....	1,240,998



## In This Issue . . .

**NEWS HIGHLIGHTS:** Railroad views in wage case outlined in letter to National Mediation Board.—Katy studies voluntary recapitalization plan.—E. J. & E. to build new office building.—N. Y. C. to expand Elkhart yards, as part of overall program to speed service to and through Chicago.

**QUIZ PROGRAM:** How much did Class I railroads spend — for equipment, rail, ties, fuel and other materials and supplies — in the first five months of 1951? See page 60.—How can damage from crank-case explosions in diesel engines be minimized? Page 45.—How many new ties did each Class I railroad install per mile of track in 1950? How much did they cost? The answer to both questions is on pages 55-58.—How can loudspeakers be used to expedite and improve yard operation? See page 42.—How did recent midwestern floods affect typical railroads in the territory? Fred Gurley of the Santa Fe and W. N. Deramus of the Kansas City Southern tell about it on page 53.

## In Washington . . .

**FREIGHT RATE FLASH:** Just as this issue was going to press, the I.C.C. announced its decision in the Ex Parte 175 rate case; as briefly reported on page 35, it is expected to give the roads about \$564 million in added revenue, on an annual basis, between now and the end of February 1953. Eastern roads get a 9 per cent boost, southern and western roads 6 per cent—but all increases are reduced by specified "hold-downs" and exceptions. "We are greatly disappointed," P.R.R. President Walter S. Franklin said of the increase. "The railroad industry will suffer. Other industries have been allowed to increase their prices to meet . . . wage increases and material costs. The railroads should have been given the same right."

**NO-STEEL THREAT RENEWED:** As of last Wednesday afternoon the steel-for-freight-cars program was, once again, in the throes of its customary monthly jeopardy, but at press time things looked some brighter. Nothing stays decided by the bureaucracy; projects as basic as this one still get brought out to be argued anew and decided again at frequent intervals—a process which multiplies jobs for the bureaucracy and nervous disorders in railroading and the car-building industry. Meantime, the combination of strikes and floods kept July freight car deliveries down to 5,290 units—only a little over half the near-10,000 level reached in May and June. That, and some of N. P. A.'s



## WEEK AT A GLANCE

current thinking about future car, locomotive and "MRO" material allocations, are all covered in the news pages.

**ARMY IN THE MARKET:** The car and locomotive material allocation program may be further complicated by the Army's announced intention to spend over \$115 million on purchase of 436 diesel locomotives, over 5,500 cars and some other types of railway equipment during fiscal 1952. Possibly, of course, steel for such Army equipment would be outside regular allotments.

### ... And Elsewhere

**WHERE THE MONEY GOES:** From 1910 to 1948 the number of government employees (federal, state and local, but excluding the military in overseas service) rose from 186 per 10,000 of population to 371 per 10,000 — or almost exactly 100 per cent. The annual governmental payroll per capita of total population (expressed in uniform dollars of 1940 value throughout the entire period) rose from \$248 in 1910 to \$526 in 1948, or 112 per cent. These disclosures were made in an article in the July issue of *Monthly Labor Review*. In 1910 only one person in 20 was on a governmental payroll; by 1948 almost one person in every 10 was getting his wages from the taxpayers.

**BUSY DIESEL FIREMEN:** In this space last week we passed along a current anecdote illustrating the prevalent assumption that the diesel firemen's calluses occur elsewhere than on his hands. Our editor insists that we footnote this yarn to the effect that "it ain't necessarily so." Plenty of the erstwhile tallowpots are putting in what might be relatively leisurely time in finding out what makes the new things tick; and in learning what the signs of trouble are before it happens. Inquisitive firemen today are the one best assurance of a force of competent enginemen in the days ahead; and probably no craft was ever given so great an opportunity to gratify its curiosity. There can't be too much know-how for an operator of a piece of machinery worth upwards of \$500,000.



ROBERT H. MORSE, JR., president of Fairbanks, Morse & Co., and of the Canadian Locomotive Company, was official host at "Diesel Day" in Kingston, Ont., when Canadian Locomotive displayed to hundreds of visitors its modernized facilities for production of diesel-electric locomotives powered by Fairbanks-Morse opposed-piston engines. Pictures of the event are reproduced in the news pages.

**"A GOOD UNION":** [Norma Lee Browning, a reporter for the *Chicago Tribune*, recently wrote a series of articles for that paper depicting "life" as she found it in Washington, D. C. The following is a fragment from her report of experiences as a "student" taxi driver.]

On a busy street corner, in a downpour of rain, a man hopped in the cab, gave an address, and said: "How about me selling you a typewriter?"

"Why?"

"You can learn to type and make more money. I got some nice typewriters. I could get you a job with a bookie."

He said he also sells cash registers and silverware and has a full-time job with the Pennsylvania Railroad. He only works 10 days a month, though. He gets paid five days for every one he works, because he belongs to "a good union."

**P.R.R. PIER:** Work will begin "before the end of the year" on a modern ore unloading pier to be built by the Pennsylvania on the Delaware river in Philadelphia at a cost of \$8 million. Contracts have already been awarded for the machinery, which will have a rated capacity of 2,400 tons per hour, and will make the new pier "one of the largest tidewater facilities" of its kind in the country.



**FOR MORE REVENUE:**

**new high speed track**

**PLUS**

**SCULLIN**



**TRUCKS**

**THE SMOOTHEST TRAFFIC-BUILDERS BETWEEN LCL AND YOUR RAILS**



NEW YORK  
CHICAGO  
BALTIMORE  
RICHMOND, VA.



*Photo Courtesy  
Cotton Belt Route*

**SCULLIN STEEL CO.**

SAINT LOUIS 10, MISSOURI



## ONLY THE STRONG CAN SURVIVE!

"The damage to box-car flooring as a result of using mechanical equipment when loading and unloading freight, continues to be one of the major problems involved in supplying good order general service cars to the shippers by the railroads."—*Report of Committee on Car Construction. 1951 Annual Meeting, Mechanical Division, A.A.R.*



PATENTS PENDING 51-SF-7



More than ever, it takes strength for freight car floors to stand up under modern mechanized freight handling methods. N-S-F assures safety and security without limitation.

Every month, more and more freight cars are being equipped with NAILABLE STEEL FLOORING. This growing acceptance of N-S-F by America's leading railroads is due to two major factors:

- N-S-F, made of N-A-X HIGH-TENSILE steel, provides strength and durability for greater operating economy.
- N-S-F and its exclusive nailing feature mean greater security for lading of all kinds.

These characteristics of N-S-F mean greater structural strength for your boxcars...greater efficiency in your overall operation.

### GREAT LAKES STEEL CORPORATION

Steel Floor Division • Ecorse, Detroit 29, Michigan

NATIONAL STEEL CORPORATION







# Stays Strong!

This rigid, one-piece, cast-steel beam (without rivets, welds, laps, or joints) retains its high initial strength indefinitely. There's nothing to shake loose—nothing to fall off—nothing for corrosion to attack except extra-thick metal sections of strong Grade "B" cast steel. Proper alignment of levers and rods is preserved, and piston travel requires resetting only as brake shoes wear.

For service and savings there's nothing like A.S.F. one-piece, cast-steel construction which permits the complete renewal of burned heads by welding-on replacement facings. This beam should last the lifetime of the car.

*the Stronger, Lighter*

## A·S·F CAST-STEEL UNIT BRAKE BEAM



**AMERICAN STEEL FOUNDRIES**  
MINT MARK OF  FINE PRODUCTS



Welcome to a new disc brake customer....

## Great Northern Railway

● As well it might be, the Great Northern is tremendously proud of its new Empire Builder, queen of its blue ribbon fleet.

Consequently it is particularly gratifying to us that the first order we have ever received from this great railway is for equipment for the Empire Builder.

Eighteen of the new cars, built by ACF, are equipped with Budd railway passenger car disc brakes and Rolokron anti-wheel-slide device. They are six coffee shop cars, each known as "The Ranch," six diners, and six lounge-observation cars.

The performance of these brakes, and their savings in operation and maintenance costs, should provide the Great Northern with a revealing comparison with other brake equipment they employ. It is a comparison we always welcome.

The Budd Company  
Philadelphia, Detroit, Gary.

The logo for The Budd Company, featuring the word "Budd" in a stylized, bold, italicized sans-serif font. A thick horizontal line is positioned above the letters, extending from the left edge of the "B" to the right edge of the "d".



## The Roller Skating Champ

—By Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Watch for other railroad cartoons by Mr. Hungerford



# Edgewater Steel Company

PITTSBURGH, PA.

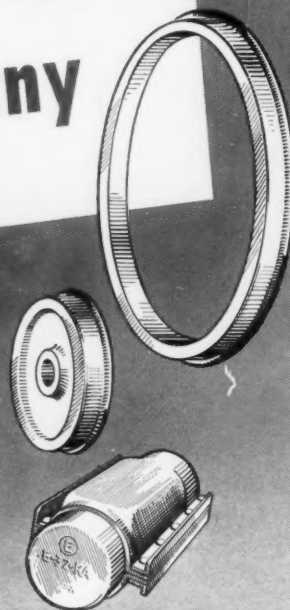
Serving America's Railroads with . . .

**ROLLED STEEL WHEELS**

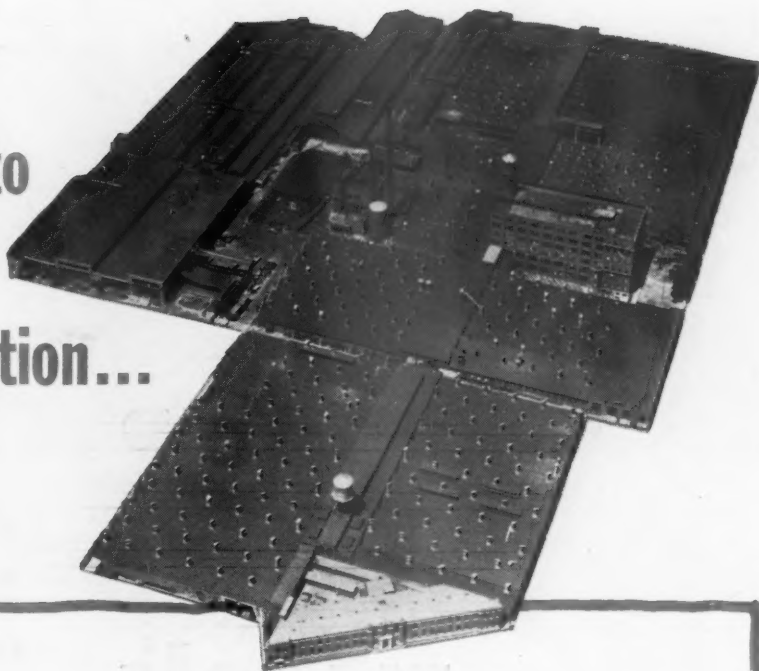
for Freight Cars, Passenger Cars, Diesel Locomotives

**ROLLED STEEL TIRES**

**DRAFT GEARS**



**White** takes the  
"highroad" to  
low cost  
roof protection...



with **Carey** Roofing Materials and **FREE** Roof Check Service

This aerial view of White Motor Company's huge truck plant in Cleveland puts a real problem into sharp focus—that of keeping 30 acres of roof from sprouting leaks!

Since 1940, White has relied on Carey products and Carey's Free Roof Check Service to do the job at lowest cost. A job that's plenty tough in industrial Cleveland, where weather whips up its worst dishes and corrosive fumes "eat" roofs.

For proof that White's program for roof care pays off, check these facts: Guided by annual recommendations, prepared by Carey Roof Check

Experts, White forecasts roof performance for the year ahead; corrects roof defects as recommended with Carey materials. Thus small troubles never reach major proportions—and yearly roof costs stay within bounds of the budget.

Whether *your* problem is one of roof design, replacement, repair or maintenance, it will pay you to consult with Carey. Backed by over 78 years' experience, and unrivaled research facilities, Carey products and services are the finest obtainable—cost less in the long run. Call your Carey Industrial Sales Engineer or write direct.



Patented Carey Enamel Clad process used to cover worn-out slate roofs at White Motor Company's plant in Cleveland, Ohio.



Where artificial light is always in use, skylights are covered by the Carey Enamel Clad system. This eliminates costly labor for cleaning and replacing windows.



Built-up roofing at the White plant is maintained in prime condition by tough, long-lasting Careyclad and Carey Fiber Coating—especially formulated to withstand the grinding abrasion of weather and corrosive fumes.

**TAKE ADVANTAGE OF  
CAREY'S FREE ROOF CHECK  
INSPECTION SERVICE**



The Carey Roof Check Method is backed by more than 78 years of field experience by Carey roofing engineers. Following inspection, you get a written report on the condition of your roof, the flashings, parapet walls, coping, gutters, etc., and recommendations for maintenance or repair. Write today for details.

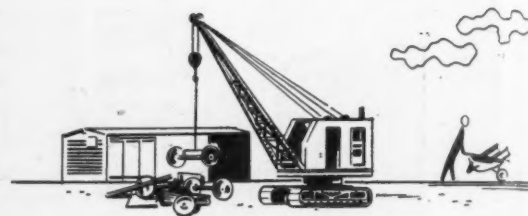
**FROM THE HOUSE OF CAREY**

Built-up Roofing • Careystone Roofing and Siding • Super-Light 85% Magnesia Insulation • Careyduct Asphalt Plank • Asphalt Paints and Coatings • Industrial Flooring • Other famous products for industry.

**Carey**

The Philip Carey Mfg. Company, Lockland, Cincinnati 15, Ohio. In Canada: The Philip Carey Co., Ltd., Montreal 3, P. Q.

don't sell  
**scrap  
 chilled  
 wheels**



DISMANTLING OLD CARS



...except to

**your supply of  
 chilled car wheels  
 depends on  
 the industry's  
 supply of  
 scrap wheels**

here's  
 why

They are an absolute necessity in making new Chilled Car Wheels.

There is a critical shortage of scrap wheels.

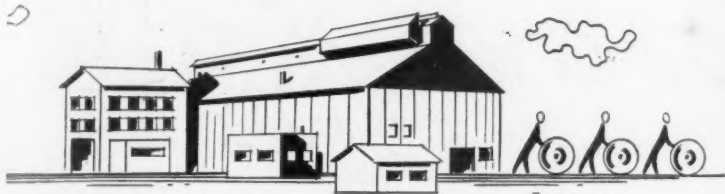
We cannot use the scrap from other industries, but other industries can and do use our scrap.

The close AAR chemical and physi-

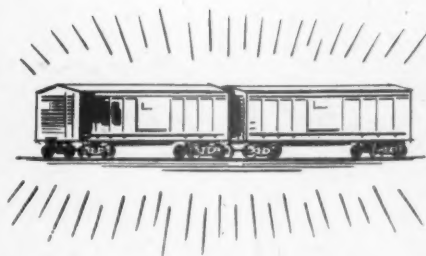
#### CHILLED CAR WHEEL ADVANTAGES

- Low first cost
- Low exchange rates
- Reduced inventory
- Short haul delivery
- Increased ton mileage
- High safety standards
- Complete AMCCW inspection
- Easier shop handling





WHEEL FOUNDRY



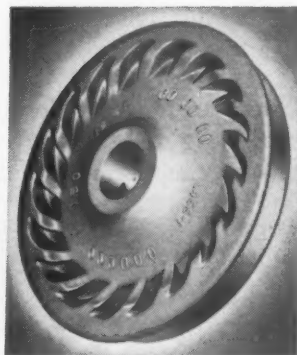
WHEELS FOR NEW CARS

# the wheel industry

cal specifications for new Chilled Car Wheels make the analysis and quality of melting stock very important.

We will not be able to continue making the required number of wheels for new cars unless we get every single Chilled Wheel that has been removed from service.

NOW, more brackets—thicker, heavier, more continuous flange support; heavier tread on both rim and flange sides.



## ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)  
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.  
Pullman-Standard Car Mfg. Co.



**BIG LOADS  
IN A HURRY!**

## new performance records on **AAR SOLID BEARINGS**

American Railroads are really working now... for defense, for all of us... moving over 20,000 ton-miles per hour of train operation—shooting for a 700 billion ton-mile total in 1951.

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Morse Opposed-Piston Diesel engines have fewer moving parts—fewer parts to wear out and replace. They have a background of development and use totaling over 5,000,000 hp. They have a future in the railroad world even more promising than their impressive past. Fairbanks, Morse & Co., Chicago 5, Illinois.



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*a name worth remembering*

DIESEL LOCOMOTIVES AND ENGINES • PUMPS • SCALES  
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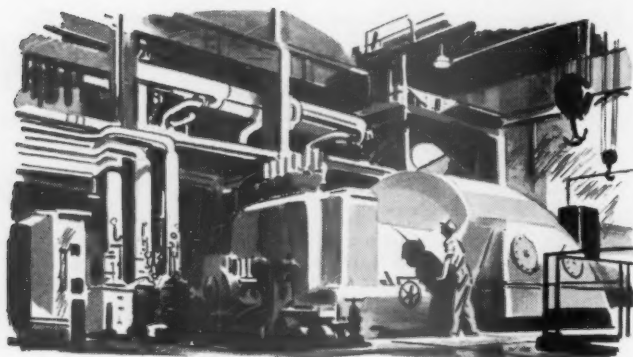
Almost everything America builds—wears—eats—produces—is made from coal or with power furnished by coal . . . coal used by America's steel mills—its railroads—its public utilities—its factories. *And don't forget all the coal used for home heating!*



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That's why the managers of this country's 8,000 mines have invested hundreds of millions of dollars in research, in modern mining machinery, in giant preparation plants and in opening new mines to replace "mined-out" or unproductive properties. *That's why this country's privately-managed coal companies have an output that no government owned or dominated coal industry—anywhere—can begin to match!*

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**WASHINGTON, D. C.**

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**YOU CAN COUNT ON COAL!**

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Vanadium steel forgings, as well as Vanadium iron castings, have been designed for the best balance of mechanical properties obtainable for the service required of each specific part.

Recommended steel and iron compositions are given in the accompanying list for a variety of parts, many of which have already established satisfactory service records. A choice of materials is shown in some instances, in recognition of preference and of those variations in design and type of service which govern the properties required.

The metallurgical engineers of the Vanadium Corporation of America realize that each part is an individual problem, and they are prepared to cooperate with you to the fullest extent in selecting the best material for each application.

• • •

Write for Data Sheet giving details of composition, heat treatment and mechanical properties of Vanadium steels and irons for various Diesel applications.



PART	MATERIAL
<b>STEELS</b>	
AXLES	C-V steel
BRAKE RIGGING CASTINGS	Mn-V cast steel
CAMSHAFTS	Cr-V (AISI 6120) steel
COUPLERS	Mn-V cast steel
CRANKSHAFTS	Cr-Mo-V (4140+V) steel Ni-Cr-Mo-V (4340+V) steel Cr-V (6140) steel Cr-V (50T46) steel C-V (1045+V) steel
ENGINE BLOCK BASE	Mn-V plate steel
EQUALIZERS	Mn-V steel
GEARS	Cr-V (6145) steel
INJECTOR TIPS	Cr-V (6145) steel
PISTON PINS	Cr-V (AISI 6120) steel
ROCKER ARMS	Mn-V cast steel
ROCKER ARM BRACKETS	Mn-V cast steel
ROCKER ARM SHAFTS	Cr-V (AISI 6120) steel
SPRINGS	Cr-V (AISI 6150) steel Cr-Mo-V steel
TRUCK FRAMES	C-V cast steel Mn-V cast steel Ni-V cast steel
<b>IRONS</b>	
CYLINDER HEADS	Mo-V cast iron, Graphidox-treated*
CYLINDER LINERS	Cr-Mo-V cast iron, Graphidox-treated* Mn-V cast iron
EXHAUST MANIFOLDS	Mo-V cast iron Cr-Mo-V cast iron, Graphidox-treated*
PISTONS	Ni-Mo-V cast iron, Graphidox-treated* Mo-V cast iron, Graphidox-treated* Ni-Cr-Mo-V cast iron, Graphidox-treated*

\*Graphidox is a graphitizing and deoxidizing alloy.

## VANADIUM CORPORATION OF AMERICA

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# Highly-stressed structural joints hold tighter when bolted, latest tests prove!

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As a result of recent tests under the auspices of the Research Council of Riveted and Bolted Structural Joints, E. J. Ruble, Structural Engineer, research staff, A.A.R., made a number of field applications, using high-strength bolts in railway structures. From his findings, he estimates savings of \$160,000 a year if high-strength bolts were used in railroad bridge repair alone . . . or a grand total of \$440,000 a year saved if all field connections were bolted. The tests *prove* that high-strength bolts stay tight longer than rivets in joints subjected to the same vibrational loading.

Ideally suited for highly-stressed structural joints are RB&W quenched and tempered steel bolts . . . heat-treated to assure the best combination of tensile strength, toughness and ductility to meet heavy load conditions.

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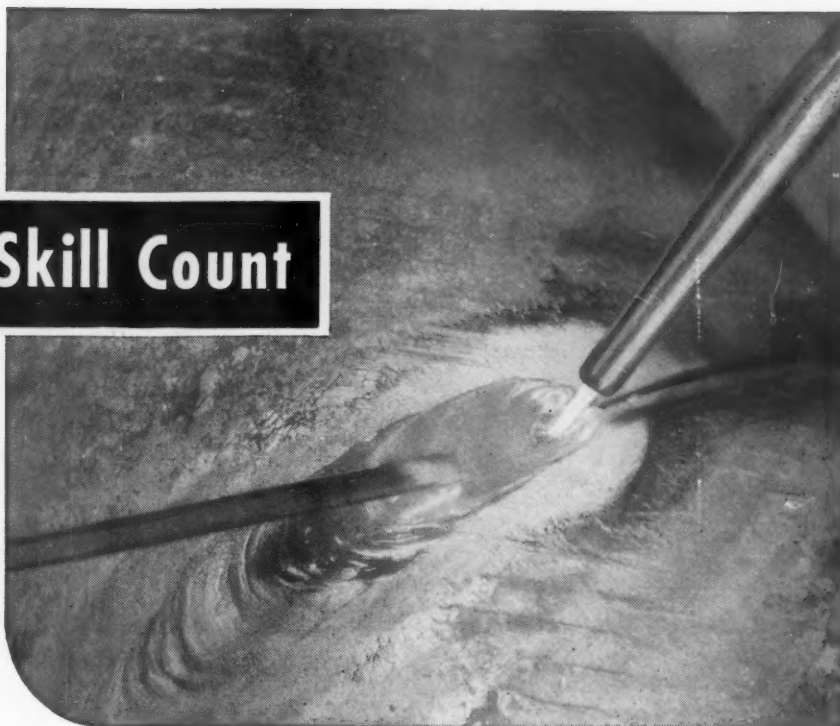
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QUALITY LINE

**106 YEARS MAKING STRONG THE THINGS THAT MAKE AMERICA STRONG**



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**Use OXWELD**  
Trade-Mark  
**Welding Rods** →



*This unretouched picture shows the clean puddle formed by OXWELD No. 1 H. T. steel rod . . . free of dirt, seams, and inclusions.*

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OXWELD rods insure clean, strong welds. They're developed by welding engineers who supervise every step in their manufacture. Careful testing insures that every rod measures up to OXWELD standards before it leaves the factory. And only rods that pass these rigid tests are marked with the OXWELD label.

There are OXWELD rods for steel, cast iron, wrought iron, copper, bronze, aluminum, and most alloys. Use them on your next job and notice the difference.

The term "Oxweld" is a registered trade-mark of Union Carbide and Carbon Corporation.



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**Flame Test**—OXWELD rods must flow easily and be free of dirt, seams, and inclusions.

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Carbide and Carbon Building Chicago and New York

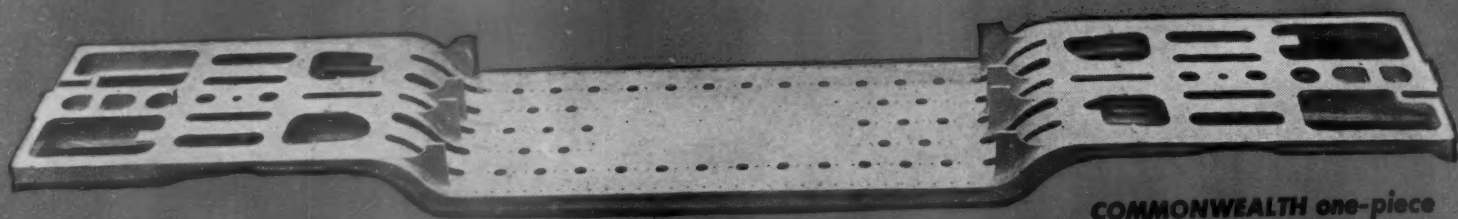
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SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

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## **Special Service Freight Cars**



**COMMONWEALTH** one-piece underframe for 125-ton 58'6" long depressed center car.



Depressed center cars of the New Haven and the Erie Railroads transporting boilers and other equipment for U. S. Navy destroyers.



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# **COMMONWEALTH CAST STEEL UNDERFRAMES AND TRUCKS**

*Are Transporting Heavy Loads*

**C**OMMONWEALTH one-piece cast steel underframes and 6-wheel trucks of proven design are being used on more and more heavy duty freight cars, assuring high availability and low maintenance expense.

These underframes combine the important elements of great strength with minimum weight, extreme durability and simplicity. For flat cars, depressed center cars and pulpwood cars, the one-piece design makes possible a lower car height from rail to loading floor, permitting easier loading and higher loads. It also provides a uniform surface for floor application.

COMMONWEALTH 6-wheel equalized trucks for high capacity freight cars provide positive equalization and adequate spring capacity which are essential to efficient, safe, economical operation. The rugged one-piece truck frames with machined integral pedestals assure true alignment of wheels and axles.

For higher availability and true upkeep economy in flat cars, depressed center cars, pulpwood cars, sulphur-carrying cars, ore cars, well cars and others — build them with COMMONWEALTH one-piece underframes and trucks.

COMMONWEALTH 6-wheel  
equalized truck for high  
capacity freight cars.



# **CAST STEEL CASTINGS**

EDDYSTONE, PA.





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ACCURACY...**

**PRECISION ... OPERATING ECONOMY**

*designed into the all new*

# AIRCO NO. 50 TRAVOGRAPH

**GAS CUTTING MACHINE**

Airco's NEW No. 50 Travograph is a rugged, all-welded gas cutting machine. Its massive, long-lived design is engineered to give fingertip sensitivity to all production operations. Used as a basic tool for multi-torch shape cutting, squaring or beveling, its outstanding accuracy slashes reject loss and working costs to a minimum.

Today's most modern production tool, the rugged new Airco No. 50 Travograph precision-cuts steel—light plates, heavy slabs, billets, forgings—to close tolerances. Here are the reasons for its remarkable exactness . . . the "why" it guarantees faithful reproduction.

1. All-welded construction provides a combination of ruggedness, resistance to vibration, and precision operation.
2. Rigidity built into the torch-bearing pantograph arms enables the torch bar to support a uniform load of 500 lbs!
3. Perfectly-balanced when properly set on 16' rails.
4. Ball bearings in the hinge joints make it extremely smooth operating.

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# WHEREVER YOU USE WOOD..



**IN THE SOUTH**, prolonged high temperatures cause light-bodied preservatives to leach and evaporate from the wood, thus exposing the wood to termite attack and decay. Barrett\* Coal-Tar Creosote, heavier bodied and of lower volatility, prevents this condition. It stays in the wood longer under all conditions—doesn't "run out" on the job.

**IN THE NORTH**, poles must resist the tremendous weight of frequent sleet storms. Avoid preservatives which *weaken* the wood. BARRETT Coal-Tar Creosote allows poles to retain their maximum strength, and helps to keep the poles at their best and hold the lines aloft.

**IN THE DESERT**, cross-ties broom, shatter and split from extreme dryness and heat. Solutions made with BARRETT Coal-Tar Creosote retard this, and also reduce mechanical wear of cross-ties through their lubricating action on the wood fibers. In poles, heavy treatment with BARRETT Coal-Tar Creosote substantially reduces checking and splitting.

**IN THE SWAMPS**, forces of decay are almost at their maximum of destructive power. High moisture content and infection from other decaying wood and debris are ever-present menaces. Poles properly treated with BARRETT Coal-Tar Creosote have survived under swamp conditions for years.

**IN FRESH WATER**, many preservatives leach out of wood. BARRETT Coal-Tar Creosote resists this leaching action. Being only negligibly soluble in water, it is the preferred preservative for use on submerged wood structures, or those exposed to the powerful action of rapidly flowing water.

**IN SALT WATER**, marine wood-borers give a preservative its severest test. Of hundreds of preservatives that have been tried through the years, *Coal-Tar Creosote* is the only one that has proved consistently effective against teredos, limnoria and other salt-water enemies of wood.

**THE BARRETT DIVISION**  
ALLIED CHEMICAL & DYE CORPORATION  
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Only coal-tar creosote wood preservative has been used long enough and widely enough to have proved its effectiveness under all conditions.



\*Reg. U. S. Pat. Off.

**COAL  
TAR**

**CREOSOTE**

# Alloy Steels

## keep the "high iron" humming

It's a longer time between overhauls . . . thanks in large part to the increased amount of alloy steels in today's Diesel locomotives. Wherever the stress is great, you'll generally find Republic Alloy Steels . . . connecting rods, gears, crankshafts, valve springs, bearings, draft gear.

Builders of railroad Diesel engines are large-tonnage users of Republic Alloy Steels. Parts can have maximum strength-to-weight ratios, can be uniformly heat-treated for dependable service, are tough to withstand shock and wear.

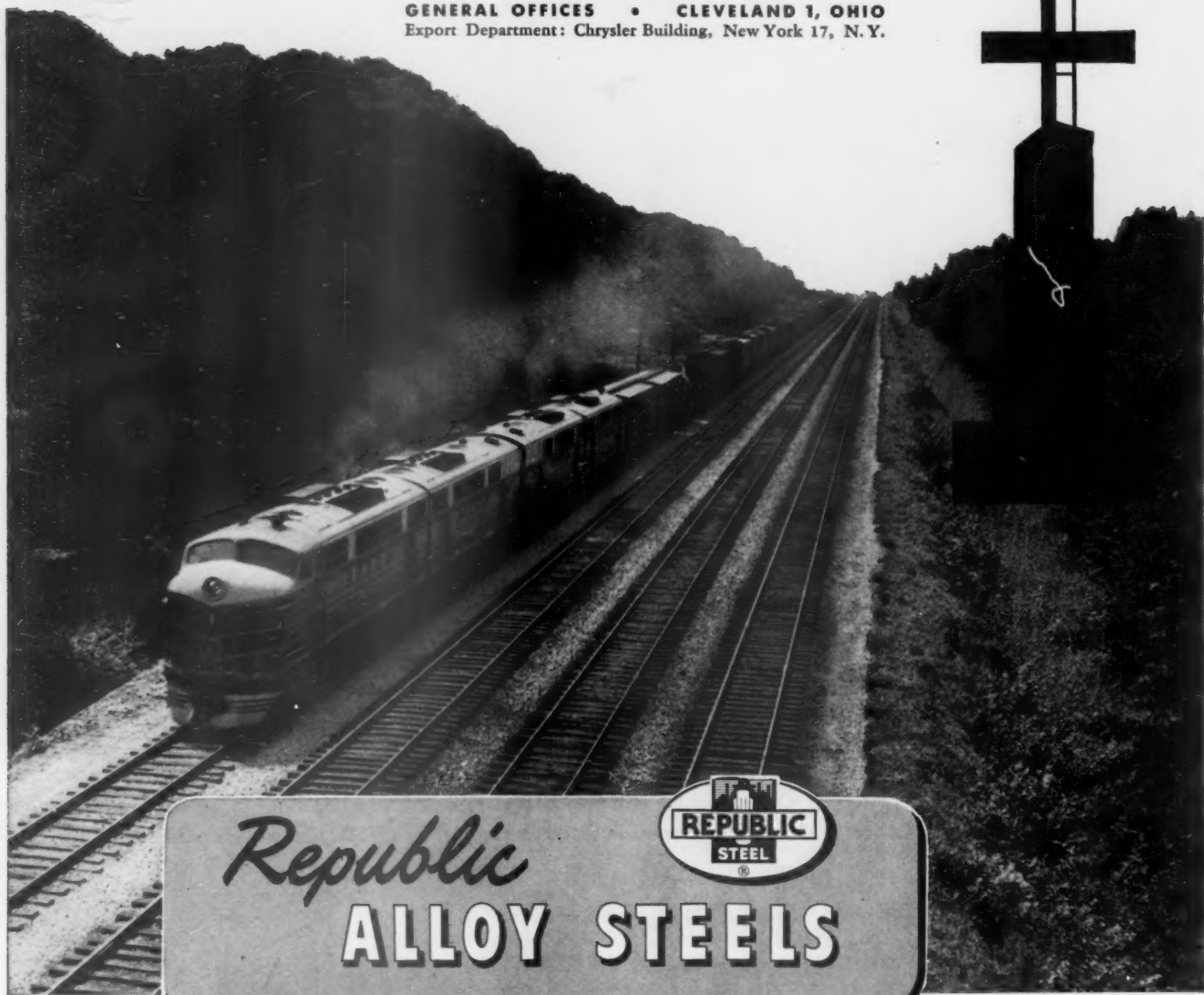
When you need alloy steels, think of Republic . . . leading producer of all types of alloy steels.

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*Republic*

**ALLOY STEELS**



*Photo by Baltimore & Ohio R. R. Co.*

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**Diesel Freight Locomotive  
Missouri-Kansas-Texas  
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## Over 1½ million unit miles on...

The Katy Komet and other fast freights of the Missouri-Kansas-Texas Lines depend on giant, three-unit diesel locomotives to keep shipments moving on schedule over the Katy's "natural route southwest." That calls for effective diesel lubrication... the kind of lubrication that STANDARD HD Oil has supplied six of these units during the past three years.

These six diesel units now have logged a total of over 1½ million unit miles of heavy-duty service on STANDARD HD. Operating efficiency has remained excellent, maintenance costs have been held to a minimum.

The Katy is one of more than 70 railroads which now specify STANDARD HD Oil because of its ability to provide



safe, effective lubrication under the most severe operating conditions. A Standard Oil Railway Department representative can help you apply these benefits to your own operations. For his services, write: Standard Oil Company (Indiana), 910 S. Michigan Ave., Chicago 80, Ill.

**STANDARD OIL COMPANY**



(Indiana)

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HIGH, LOW or NO LIFT,  
LARGE, MEDIUM or FINE BALLAST  
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*The Smoothest Roadbed Ever Traveled*

IS ACHIEVED AT AMAZING

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On major ballasting operations this machine has proved beyond the shadow of a doubt, its unrivaled ability to put up the finest, most uniform track in the shortest time and at the lowest cost per mile. But that's only one of its functions. Switch to the other set of tamping blades and it will **smooth** track, in those operations in which there is little or no lift and no new ballast is spread, better and far faster than any other method you have ever employed. The Jackson Multiple Tamper is a double-barrelled time and money saver no maintenance chief can afford to ignore. Let us tell you more about it.

\*Savings made in a single season usually exceed the cost of the machine.

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*W*HEN the temperature drops and blizzards sweep across the country, you can be thankful that you're using **BARCO STEAM HEAT CONNECTIONS!**

Barco connections are designed *right* and built *right* to meet the most severe service conditions. Ample capacity to handle steam supply on longest trains. Freedom from leakage; pressure-sealed and blowout-proof! Built with light weight all-welded steel to carry up to 300 psi steam, saturated or superheated. Ball joints of specially hardened alloy steel.

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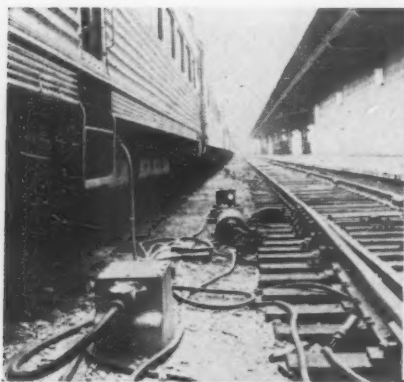
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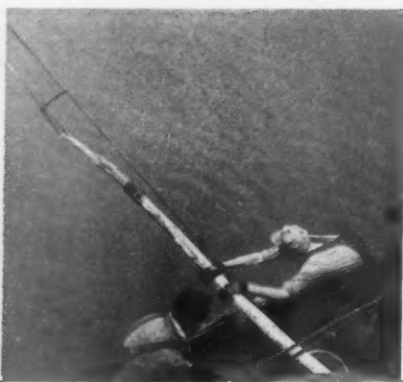
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FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY





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More than 60 of the Class 1 American Railroads are using Okonite insulated cables for their many electrical needs. They have learned from experience that in railway installations there can be no compromise with quality.

And Okonite *is* a quality cable from conductor to covering. The Okoloy coating prevents copper corrosion. The Okonite insulation, made from Up-River Fine Para Rubber, possesses unequalled electrical stability. The Okoprene sheath defies weather, oil and heat and will not support combustion.

For over 72 years cables insulated with Okonite have been establishing remarkable service records. Some of the uses in which Okonite cable is giving day-in and day-out trouble-free performance are shown at the left.

If you would like details on the advantages of Okonite cable for your railroad's electrical needs, call in your Okonite representative, or write The Okonite Company, Passaic, N. J.

THE BEST CABLE IS YOUR BEST POLICY



# OKONITE



*insulated wires and cables*

B526

## WHERE IS THE MONEY FOR IMPROVEMENTS TO COME FROM?

J. Carter Fort, vice-president and general counsel of the Association of American Railroads, recently made a vigorous protest to the Senate Finance Committee against the increase in federal taxation of the railways proposed in the tax bill passed by the House. He emphasized that the railways cannot continue the large expenditures for improvements and expansion required by the present emergency if their net earnings are to be further reduced by increased taxation.

Statistics for the first five months of 1941 and 1951 given in the accompanying table show what great changes have occurred in the gross earnings (operating revenues), expenses and taxes of the railways in the decade since we were preparing in 1941 for World War II. Although gross earnings more than doubled, there was an actual decline in net operating income.

### **Taxes and Other Expenses**

The principal cause was that the amount of gross earnings consumed by expenses and rentals increased from only 73 per cent in 1941 to 81 per cent in 1951. But the "take" of taxes also increased. The railways paid about \$48 million in federal income taxes in the first five months of 1941. But these taxes this year were \$213 million, which—added to payroll and other taxes (principally local and state)—increased total taxes from \$193 million, or about 10 per cent of gross earnings, in 1941, to \$477 million, or 11.4 per cent of gross earnings, in 1951. The net results were that in the first five months of 1941 expenses and taxes consumed about 82.7 per cent of gross earnings, while in the same part of 1951 they consumed 92.3 per cent, leaving 17.3 per cent for net operating income in 1941 and less than 8 per cent in 1951.

In 1941, when the nation was preparing for participation in World War II, the railways had a large surplus capacity, as indicated by the fact that freight car surpluses ranging from 40,000 to almost 200,000 were reported throughout 1941. The situation is entirely different

now. The freight traffic being handled by the railways is almost 60 per cent larger than in 1941. This great increase in traffic has largely exhausted the surplus capacity the railroads were able to utilize before and during World War II. Hence in order to meet future demands, they must be able to improve and expand their facilities in proportion to whatever increase in transportation service may be required. Otherwise, they might become a bottleneck which would throttle all efforts to increase production.

But adequate railway expansion requires vast capital expenditures on both equipment and roadway and structures, and the necessary capital can be derived, directly and indirectly, only from net operating income. Net earnings, after taxes, can either be spent directly for additions and improvements—or, if sufficiently attractive, they may be used as an incentive to induce investors to supply the capital funds required. But, as the accompanying table shows, net operating income is actually less in *dollars* in 1951 than it was in 1941, in addition to which the purchasing power of each dollar has been reduced at least one-half.

### **A Menacing Situation**

This menacing railway situation has been created by some branches of the government—while other branches of the same government are urging huge increases of production as essential to the national salvation. Policies of some branches of the government have more than doubled the wages, prices and taxes that the railways must pay, while the Interstate Commerce Commission, another branch of the government, has restricted to 40 per cent the increase since 1941 in railway revenue per ton-mile.

In the first five months of 1941, when there was much less need for railway expansion than there is now, net operating income was \$340 million. The statistics in the table show that within the last decade total expenses, rentals and taxes increased from \$1,629 million to \$3,859



million, or 137 per cent. In view of the decline of about one-half in the purchasing power of the dollar, there is no good reason why rates should not have been so regulated that net operating income in the first five months of 1951 would have been double what it was in 1941, or \$680 million. This would have been \$360 million more than the 1951 net operating income actually earned, but would have required gross earnings to have been less than 9 per cent larger than they were.

### Anti-Inflationary Effect

Would this difference of less than \$400 million in net operating income have been inflationary? It would have been a very small difference compared with the increases in wages, prices and taxes that had actually occurred; and, since the increase was needed to enable the railways to expand their facilities and handle more traffic, it would have been in the long run anti-inflationary, because of the contribution it would have enabled the railroads to make toward increased production.

The needs of the railways have been so long ignored by persons in high positions in the government because railway managements, in spite of inadequate net earnings, have gone ahead using all the resources they have had to prepare the railways to meet every emergency demand that may be made upon them. But, as Mr. Fort warned the Senate Finance Committee, the government can no longer treat railway expenses and taxes as it does those of other industries unless it is also going to begin treating their prices, and gross and net earnings, as it does those of other industries. It is not a question of the selfish interest of railway owners, but of the public interest in providing the railroads with the means of keeping their plant adequate to the needs of commerce and the national defense.

#### FIRST FIVE MONTHS

	1941 (million)	Per cent of oper. revenues	1951 (million)	Per cent of oper. revenues
Operating revenues	\$1,969		\$4,180	
Expenses and rentals	1,433	72.8	3,382	80.9
Taxes:				
Payroll	51	2.6	118	2.8
Federal income	48	2.4	213	5.1
Other	97	4.9	146	3.5
Total taxes	196	9.9	477	11.4
Net Operating Income	340	17.3	321	7.7

### IF MANUFACTURERS WERE IN RAILROADS' SHOES . . .

"Under our free economy, the lumberman, the manufacturers of automobiles, of radios and refrigerators, of plumbing supplies and gadgets, all have the right to determine what it costs to deliver a given commodity to the man who sells it to the public. If you happen to make kitchen ranges, as an example, and your material and labor costs mount to the point where you have to tack on 10 or 15 per cent to your price in order to make a return on your investment, you do so. You don't have to go before a government com-

## WHERE MORAL

## REFORM SHOULD BEGIN

Alarm and indignation have arisen at the revelation of cheating in examinations at West Point — and the point is made in extenuation that the boys have had plenty of bad examples set for them in high places. If the cadets are fired for their misdeeds, who then will unseat the rascals in positions of public trust whose precedents have served to persuade the neophytes that faithlessness is respectable?

Who is guilty of the unconcern which puts those who hold principle in contempt into positions of trust — not alone in government, but in corporate posts as well — and who is to blame that they stay in office when their failings are made manifest? The final responsibility comes to rest upon the individual voter and stockholder — that is, reader, upon you and me.

Schoolboys and public and corporate officials do not create moral standards — they merely reflect the standards prevalent in their surroundings — leaving out of account, of course, the downright criminals and misfits from whom even the most moral societies can never be entirely free. Viewing conspicuous corruption with alarm is appropriate and timely — but only on the part of those whose own behavior in parallel circumstances is habitually beyond reproach. Industry itself could do with more of the moral and intellectual integrity — the shortage of which in public office is so loudly decried; and the best, indeed the only, way to hold public servants to high standards is for private business dealings to provide the electorate with a better object lesson of such standards. If punishment for wrongdoing were spread as evenly and widely as the wrongdoing itself is, there would be comparatively few of us who would escape at least a well merited thump every time some public rascality is uncovered.

The discussion of such matters in a business paper is, doubtless, a little unusual — but it is certainly not inappropriate. Economic and political freedom for business and everybody else is endangered quite as much by unethical behavior as by uneconomic behavior — perhaps even more.

mission, state your case, make your plea, and then have the ultimate consumer come in and protest, say that your price is exorbitant and unjustified. When your retail outlet passes on to the consumer the price increase of the commodity, that's the end of it. True, the consumer may shop around to see if somebody else makes a range that he can buy a little cheaper but the chances are that if the customer wants your product he's going to buy it, pay the increase and forget it. There's no publicity in the papers, no shouting and spouting by government agencies that you just can't do that to the consumer."—*William E. Hayes, executive assistant, Chicago, Rock Island & Pacific, before the Portland (Ore.) Transportation Club, June 22.*



# NEWS



## OF THE RAILROAD WORLD



### Roads Deny Charges Of High Mail Pay

**Call air line statements  
"erroneous and misleading"**

Statements by the air lines that railroads received more than 45 cents per ton-mile for hauling first-class mail in 1950 have been branded as "erroneous and altogether misleading" by Dr. Julius H. Parmelee, vice-president of the Association of American Railroads and director of the A.A.R.'s Bureau of Railway Economics.

In a letter to the Senate Committee on Interstate and Foreign Commerce, Dr. Parmelee said the 45-cent figure is "an overstatement of 200 per cent." He said railroad revenue for transporting first-class mail in 1950 actually averaged only about 15 cents a ton-mile. For all classes of mail handled the railroads received only about 8.6 cents per ton-mile, he added.

The Senate committee has been conducting hearings on legislation that would separate subsidies from air mail pay. The air line statements about railroad mail pay were made during the course of these hearings.

#### Three Major Errors

Dr. Parmelee's letter to the committee said such air line calculations were erroneous in three principal respects.

He said the calculation assumes that all space in railroad post office cars is purchased entirely for the

purpose of transporting mail, although an average of 75 to 80 per cent of the space in these cars is purchased and used by the Post Office Department for sorting and distributing mail en route.

The figure of 45 cents also assumes a railway mail pay increase of 49 per cent over the 1950 rates, although the actual increase is only 19 per cent, Dr. Parmelee continued.

Finally, the air line calculation reduced railroad ton-miles of mail by 18.1 per cent for the alleged purpose of making an allowance for circuity of haul by rail, he said. He

added that this adjustment has "no possible justification," because it overlooks the necessity of the post office to serve intermediate points located on rail routes.

#### Jelsma Supports Rail Figures

Before receiving Dr. Parmelee's letter, the Senate committee heard a member of its own staff discuss "certain inaccuracies" in testimony presented at the subsidy hearings. E. R. Jelsma, staff director of the subcommittee on domestic land and water transportation, said it appears "grossly incorrect" to say that railroads re-

### I. C. C. APPROVES FREIGHT RATE BOOST AVERAGING 6.6 PER CENT FOR U. S.

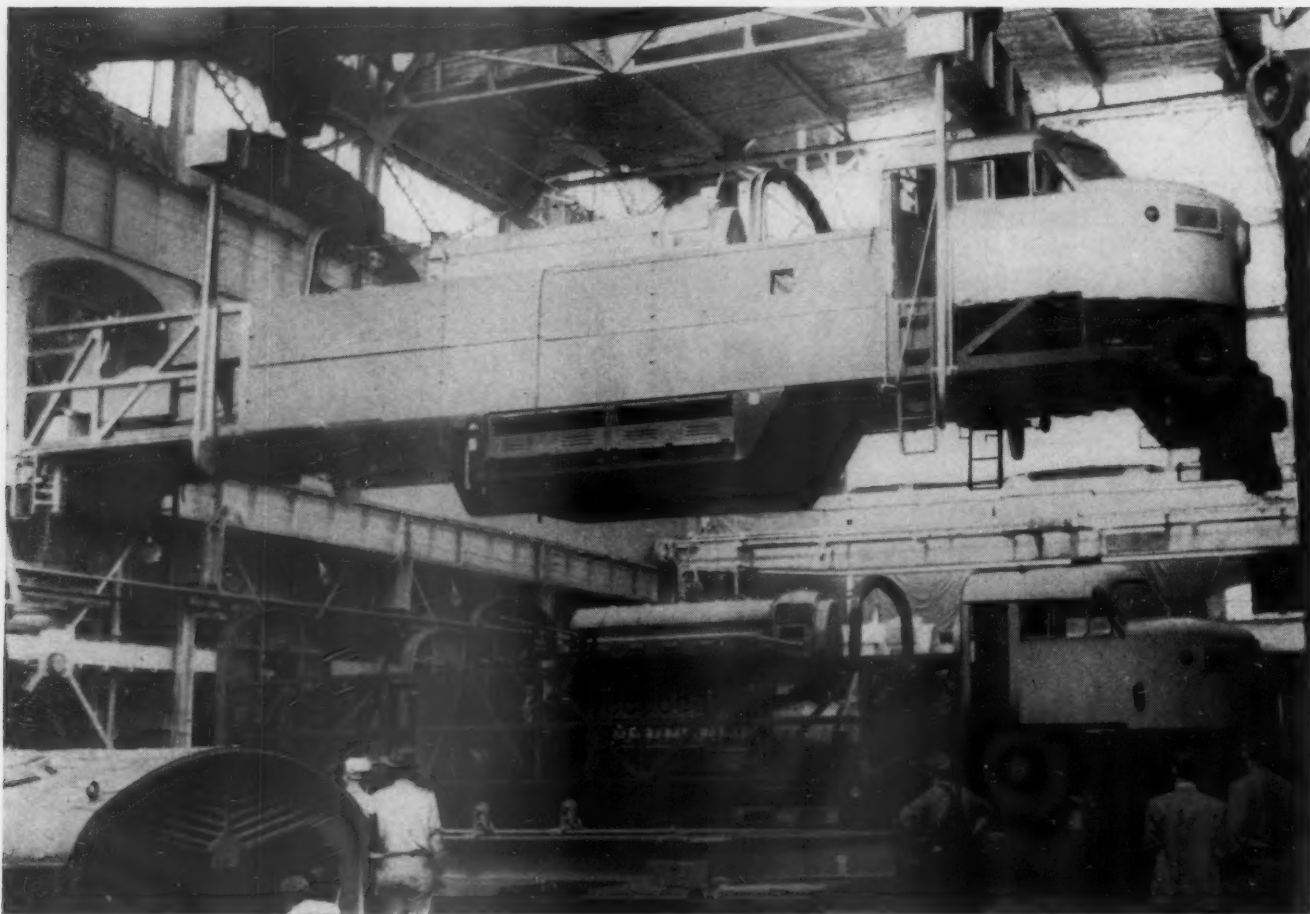
By a report in Ex Parte No. 175, made public August 8, the Interstate Commerce Commission has authorized a freight rate increase for the nation's railroads that will add an estimated \$564,000,000 in annual revenue. The overall increase, giving effect to "hold-downs" and exceptions, amounts to 6.6 per cent for the country as a whole.

The new boost includes the interim increase of 2.4 per cent authorized in March. By territory, the new increases are as follows: Eastern, 7.5 per cent; Pocahontas, 6.8 per cent; and South and West, 5.8 per cent. These figures also give effect to "hold-downs" and exceptions. Otherwise, the increases are 9 per cent in the East, 6 per cent in

the South and West, and 6 per cent interterritorially. The higher rates will be applied as surcharges, and may be placed in effect on 15 days notice. Authority to maintain the increases expires February 28, 1953, unless sooner modified or terminated. The record in the case is being held open, because the commission feels that no increases granted in Ex Parte 175 "should be prescribed as permanent or unremovable additions to the freight-rate structure."

By region, the rate increase will push revenues upward by an estimated \$242,000,000 in Eastern territory, \$36,000,000 in Pocahontas region, \$71,000,000 in Southern territory, and \$215,000,000 in Western territory.





ceive 45 cents a ton-mile for carrying first-class mail. He said they received 15.1 cents per ton-mile in 1950.

Mr. Jelsma discussed the subsidy problem in a July 30 presentation, during which he said the railroads comprise the "largest and most essential part" of the nation's transport network. Commenting on air line subsidies, Mr. Jelsma said:

"There is a direct relationship between mounting railroad passenger deficits, the desperate need for a healthy and stable railroad passenger service in the interest of commerce and the national defense and the policy of subsidies to the air lines in the form of exorbitant air mail payments. These payments are the essential factor in the ability of the air lines to compete for potential railroad passenger traffic. With the government footing the bill, air lines go after the very traffic that may mean the difference between weakness and strength to the nation's railroads, in spite of the fact that these same railroads must be called on to carry the heavy burden of transporting the bulk of our entire mobilization effort."

#### Air Line "Inaccuracies"

Turning to some of the "inaccuracies" mentioned above, Mr. Jelsma noted that one air line witness said the railroads "actually receive more

per ton-mile for carrying first-class mail than for carrying passengers."

In this connection, Mr. Jelsma said the roads receive "about 25.6 cents per ton-mile" for carrying passengers. This, he added, is "almost twice" what they are paid for first-class mail and "three times what they are paid for carrying all mail."

"There are 129 Class I railroads and 500 smaller lines which constitute the backbone of our national transportation system," Mr. Jelsma continued. "These railroad lines are indispensable to the national defense for the simple reason that they carry

the tremendous volume of freight required which cannot be moved by any other carrier or combination of carriers. . .

"It ought to be evident, then, that the financial distress of the railroad passenger, express and mail business, in a period of relative prosperity, represents a most serious threat to the security of the nation today. The railroads comprise the largest and most essential part of our vast transportation network and cannot safeguard our future if passenger deficits, mail losses, and subsidy to competitors weaken their existence."

## Never Again-Santa Fe Determined to Keep Argentine Dry

"This is the time and place for a statement from those of us with a large stake in Kansas and Missouri of our purposes and our determination about the destructive flood of the Kansas (Kaw) river," Fred G. Gurley, president of the Santa Fe System lines, stated at the flood control conference held in Kansas City on July 25.

"We are determined that come another flood such as we experienced on July 13th, our Argentine terminal will not be under water. Argentine is vital to our operation," he continued. "Sure-

ly the situation is a serious one, but we are not frightened. We are determined that the area there can and will be kept dry. We are determined that our industrial lands at Argentine and Turner will not again be under water."

Commenting on previously announced plans to build a \$4 million diesel servicing facility at Argentine terminal, Mr. Gurley said "On July 13, there was 22 feet of water over its proposed location. In the light of our conviction and determination, we propose



### CANADIAN LOCOMOTIVE CHRISTENS FIRST UNITS

Kingston, Ont., turned out on August 1 to help several hundred visitors celebrate "Diesel Day" and dedicate the first units of "Consolidation Line" locomotives to be produced in the Canadian Locomotive Company's plant—on which upwards of \$2,000,000 is being spent in modernization and equipment to produce Fairbanks-Morse opposed-piston diesel engines and to assemble complete locomotives. It is



expected that by the end of this year the plant's capacity for diesel-electric locomotive production will exceed the 16 locomotives a day which were built when the plant was turning out steam power, no more of which will be built.

The "City of Kingston," the first 3,200-hp. two-unit locomotive from the Kingston plant, was christened by the Rt. Hon. C. D. Howe, Canadian minister of trade and commerce and minister of defense production, who is shown above with Robert H. Morse, Jr., president of Canadian Locomotive Company and of Fairbanks, Morse & Co.

The increased facilities at the Kingston plant are for production of diesel switchers and industrial locomotives as well as road power. The first units (facing page and above left) were painted with Canadian Pacific colors and are the Canadian prototype of the Consolidation, or C-Line, locomotives in which packaged units can be combined to produce 78 different locomotive combinations with one standard cab body. The Consolidation line of diesel locomotives ranges from 1,600- to 9,600-hp. and is adaptable to all classes of service

to go forward with the construction of these facilities at the location we had previously decided upon."

The Santa Fe's plans to raise its main line track above the flood level in 14 locations in eastern Kansas and in Missouri was described, together with a reporting of the steps taken—some time before the disastrous flood of July 13—to have the dikes surrounding the Argentine terminal and industrial district strengthened and

raised. However, work had not been started before high waters struck.

Mr. Gurley pointed to the necessity for concerted action to prevent recurrence of a similar "great tragedy which has affected the lives and homes of people." He then gave the Santa Fe's pledge to the U. S. Army Engineers Corps and to its neighbors in Kansas and Missouri for full cooperation in bringing about adequate and desirable flood protection.

an estimated net income of \$50,000,000, compared with \$75,000,000 in the same month last year. Net railway operating income for the 1951 month was \$63,930,048, while in June 1950, it was \$90,025,721.

In the 12 months ended with June, the rate of return averaged 4.38 per cent, compared with 2.99 per cent for the 12 months ended with June 1950.

Gross in the first six months of 1951 amounted to \$5,035,876,498 compared with \$4,223,707,275 in the same period of 1950, an increase of 19.2 per cent. Operating expenses amounted to \$3,975,306,446, compared with \$3,354,141,920, an increase of 18.5 per cent.

Eighteen Class I roads failed to earn interest and rentals in the first six months, of which nine were in the Eastern district, one in the Southern

region, and eight in the Western district.

Class I roads in the Eastern district in June had an estimated net income of \$19,000,000 compared with \$32,000,000 in June 1950. In the six months, their estimated net income was \$78,000,000 compared with \$78,000,000 in the same period of 1950.

Their net railway operating income in June amounted to \$32,442,767 compared with \$40,284,420 in June 1950. Those same roads in the six months had a net railway operating income of \$157,513,998 compared with \$151,580,965 in the same period of 1950.

Gross in the Eastern district in the first six months totaled \$2,251,929,578, an increase of 18.2 per cent compared with the same period of 1950. Operating expenses totaled \$1,826,735,709, an increase of 19 per cent.

#### In the South

Class I roads in the Southern region in June had an estimated net income of \$7,000,000 compared with \$8,000,000 in June 1950. In the six months, their estimated net income was \$48,000,000 compared with \$45,000,000 in the same period of 1950.

Those same roads in June had a net railway operating income amounting to \$9,119,785 compared with \$10,715,058 in June 1950. Their net railway operating income in the first six months amounted to \$71,319,531 com-

## Net Income for First Half Is \$250 Million

### Net railway operating income for 6 months is \$388 million

Class I railroads in the first six months of 1951 had an estimated net income, after interest and rentals, of \$250,000,000, compared with \$209,000,000 in the corresponding period of 1950, according to the Bureau of Railway Economics of the Association of American Railroads.

The six-months net railway operating income, before interest and rentals, was \$388,044,695, compared with \$346,295,612.

Estimated results for June showed



pared with \$66,136,889 in the same period of 1950.

Gross in the Southern region in the six months totaled \$724,356,775, an increase of 17.9 per cent compared with the same period of 1950, while operating expenses totaled \$556,722,952, also an increase of 17.9 per cent.

### Western Results

Class I roads in the Western district in June had an estimated net income of \$24,000,000 compared with \$35,000,000 in June 1950. Their estimated net income in the six months was \$124,000,000 compared with \$86,000,000 in the same period of 1950.

Their net railway operating income in June amounted to \$22,367,496 compared with \$39,026,243 in June 1950. Those same roads in the six months had a net railway operating income of \$159,211,166 compared with \$128,577,758 in the same period of 1950.

Gross in the Western district in the six months totaled \$2,059,590,145, an

increase of 20.9 per cent compared with the same period of 1950, while operating expenses totaled \$1,591,847,785, an increase of 18.2 per cent.

CLASS I RAILROADS—UNITED STATES		
	Month of June	
	1951	1950
Total operating revenues	\$855,753,244	\$779,182,389
Total operating expenses	677,684,976	588,763,307
Operating ratio—per cent	79.19	75.56
Taxes	96,568,337	84,293,231
Net railway operating income (Earnings before charges)	63,930,048	90,025,721
Net income, after charges (estimated)	50,000,000	75,000,000

Six Months Ended June 30, 1951		
Total operating revenues	\$5,035,876,498	\$4,223,707,275
Total operating expenses	3,975,306,446	3,354,141,920
Operating ratio—per cent	78.94	79.41
Taxes	570,919,760	434,899,975
Net railway operating income (Earnings before charges)	388,044,695	346,295,612
Net income, after charges (estimated)	250,000,000	209,000,000

## Further Cut in Freight Car Program Expected

The National Production Authority has announced that allotments of steel, copper and aluminum in the fourth quarter of this year will cut freight car production by as much as 10 per cent in the first three months of 1952.

On the basis of planned allotments to the railroad industry in the fourth quarter, there will be material sufficient for construction of 24,500 freight cars and 2,500 tank cars in the first quarter of 1952, the agency said. The announcement also said that a "very substantial cut" in the amount of maintenance, repair and operating supplies is "considered probable" in the first quarter of next year.

This announcement by N.P.A., followed an August 6 meeting with members of the agency's Railroad and Railroad Contract Car Builders Committees.

According to N.P.A., members of the Railroad Advisory Committee protested the tentative decision to allocate steel first for the car building program and then to allot the remainder for MRO supplies. This committee asked that MRO be given first priority.

Acceptance of this change, N.P.A. said, would reduce the freight car program to about 10,000 cars a quarter.

The Contract Car Builders Committee was critical of this recommendation that MRO supplies be given top priority, N.P.A. said. They warned that such a move would "demoralize" the car building industry, and said the heavy cut in production would increase the cost per car by from \$1,000 to \$2,000.

The agency said both railroad and car builder representatives agreed on the need for 10,000 new freight cars a

month, but N.P.A. maintained that demands for steel allotments in the fourth quarter already range "from 125 per cent to 600 per cent of anticipated supply."

Following this freight car announcement, N.P.A. issued a similar statement with respect to locomotives. These, too, will be cut back in the first quarter of 1952, and production is now estimated at 750 for the three-month period. In the fourth quarter of this year, 825 locomotives are scheduled for production.

### Cheney Announces Awards In B.R.T. Rules Dispute

The decision of Referee George Cheney with respect to two disputed rules between the railroads and the Brotherhood of Railroad Trainmen was announced last week. Mr. Cheney's findings, which both sides agreed in advance to accept, are due to become effective September 1.

The rules involved in the dispute are those relating to pay for coupling or uncoupling air, steam or signal hose; and the pay of road service employees for performing more than one class of service on a single trip.

Mr. Cheney's award with respect to the air hose said as follows:

"A new rule should be drafted and inserted in the principal agreement between the parties to this proceeding dated May 25, 1951, which should read as follows:

"Rules, agreements, interpretations or practices which prohibit or restrict the use of yardmen to couple or uncouple air, steam and signal hose, shall be modified so that there will be no prohibitions or restrictions on yardmen performing such work and no payment therefor will be made but where rules, agreements, inter-

pretations or practices require payment to yardmen under conditions stated therein for coupling or uncoupling air, steam and signal hose, such rules, agreements, interpretations or practices shall be changed to provide for the payment of only 95 cents.

"Individual carriers may elect to accept this rule or retain their present rules or practices without modification, by so notifying their general chairman prior to September 1, 1951, and if accepted the date of such notification shall become the effective date."

As to the "more than one class of service" rule, Mr. Cheney made this award:

"A new rule should be drafted and inserted in the principal agreement between the parties to this proceeding, dated May 25, 1951, which should read as follows: 'Road trainmen performing more than one class of road service in a day or trip will be paid for the entire service at the highest rate applicable to any class of service performed. The overtime basis for the rate paid will apply for the entire trip.'"

The second rule also includes a set of eight "questions and answers" to clarify and limit its meaning. According to Mr. Cheney, these were added at the suggestion of the brotherhood.

Since the announcement of Mr. Cheney's findings on August 1, the carriers have made no comment on the new rules. The Trainmen, however, through the union's official publication, "Trainman News," labeled the decision as "despicable" and "grossly unfair." They said the award "tends to wipe out benefits won and enjoyed by the 'rails' for years."

"In reality, the air hose award is nothing more than an exact duplicate of the deplorable, precedent-setting pact which the Switchmen's Union of North America negotiated (with the carriers) last fall," the newspaper said. It added that the decision is being given "close study" by B.R.T. leaders and their legal counsel.

The May 25 agreement to which Mr. Cheney referred in prescribing the new rules was signed by the railroads and the B.R.T. on that date. It was a settlement of the long-pending wage and rules dispute, and its provisions were outlined in *Railway Age* of June 4, page 60.

Among other things, that agreement provided that the parties would arbitrate the two disputed working rules. It was agreed that the referee's findings would be "final and binding."

President Truman appointed Mr. Cheney for this job on June 8. Hearings were held in Washington, D. C., beginning June 25. Mr. Cheney is an industrial relations consultant from San Diego, Cal.

### I.C.C. Won't Reconsider Trip-Leasing Order

Petitions for reconsideration of the recent "trip-leasing" order of the Interstate Commerce Commission have been denied by the commission. The order, now scheduled to become effective September 1, prescribes rules to



**THIS COMBINATION EATING HOUSE AND "HOTEL"** is operated for the comfort of Frisco employees at Springfield, Mo., nerve center of the system. The new building is a part of the railroad's extensive \$5-million improvement program at Springfield, which in-

cluded a new freight classification yard, diesel shop, division office building and supporting facilities. (*Railway Age*, July 8, 1950, page 32.) The second floor has 10 rooms, which, together, will accommodate 16 members of away-from-home train crews

govern the leasing and interchange of vehicles by common and contract truckers. (*Railway Age*, May 28, page 61.)

The American Trucking Association and 55 other "interested parties," including the Secretary of Agriculture and many individual truckers, had asked the commission for reconsideration or modification of the proposed leasing rules.

In denying these petitions the commission said that evidence in the case "justifies the rules prescribed by the commission in its order of May 8," and added that the present petitions did not set forth any grounds to warrant granting the relief sought.

### Joint Rail-Barge Rates Deferred Again by I.C.C.

A further postponement, from September 1 to March 1, 1952, in the effective date of the order requiring railroads and water carriers on inland waterways to establish through routes and joint rail-water rates reflecting differentials under all-rail rates has been announced by the Interstate Commerce Commission.

The postponement order noted that a July 26 letter from the railroads, with the concurrence of the Federal Barge Lines and the American Barge Line Company, requested the additional six months. The order said "several problems have arisen in connection with the interpretation of the commission's findings and certain of these difficulties are still unresolved."

The outstanding I.C.C. order that is being postponed was handed down June 13, 1949. It was appealed to the

courts, and on January 2 this year the Supreme Court upheld the commission by refusing to set aside the original order. (*Railway Age*, January 8, page 46.)

### I.C.C. Denies Signaling Relief to Three Roads

Petitions for partial relief from signaling requirements of the Interstate Commerce Commission have been denied to three railroads, the Norfolk & Western; the Nashville, Chattanooga & St. Louis, and the Delaware, Lackawanna & Western. The adverse reports were by Commissioner Patterson.

The N. & W. and N. C. & St. L. sought modification of the commission's order of June 17, 1947. This order requires installation of an automatic block signal system on lines over which any passenger train is operated at 60 or more m.p.h. or any freight train is operated at 50 or more m.p.h.; and installation of an automatic train-control or cab-signal system on lines over which any train is operated at 80 or more m.p.h.

The N. & W. asked for permission to operate passenger trains up to 90 m.p.h. between Portsmouth, Ohio, and Ironton, 23.2 miles, and between Poe, Va., and Norfolk, 69.8 miles. Installation of the required signal devices would cost \$672,000, the road said. The N. C. & St. L. sought relief with respect to its 138-mile segment between Bruceton, Tenn., and Aulon, where it sought to operate passenger trains in excess of 59 m.p.h. and freight trains in excess of 49 m.p.h. The road said an automatic block

signal system on this segment would cost \$650,000.

Relief sought by the D. L. & W. included installation of an automatic train-stop system on its line between East Buffalo, N. Y., and Scranton, Pa., in lieu of the present automatic cab-signal system. The road also requested modification of the I. C. C. order requiring a train to observe the lower speed when there is a difference between the speed authorized by roadway signals and that authorized by cab signals. Commissioner Patterson's denial said operation in the manner proposed by the road "would not give the maximum protection intended in railway operation."

Meanwhile, as these denials were issued, the commission granted permission to the Boston & Albany to discontinue its interlocking at Hinsdale, Mass., and to discontinue and modify automatic signals between Chester, Mass., and Hinsdale, approximately 16 miles. Along the latter segment the road will install automatic two-unit searchlight type signals.

### New Bill Aims to Protect Transport From "Rackets"

A bill to amend section 1 of the Interstate Commerce Act so as to keep all modes of transportation free of "terrorism, extortion, racketeering, and similar unlawful or unethical business tactics" has been introduced in the Senate.

Senator O'Connor, Democrat of Maryland, introduced the bill, S. 1899, on behalf of himself and other members of the special Senate committee studying organized crime in interstate commerce.

An explanatory statement by Senator O'Connor said the crime committee has noted "certain instances" in which racketeering elements undertook to force their way "into the business of interstate transportation itself." He added that the committee has been impressed with how vulnerable some parts of the transportation industry—"e.g., over-the-road trucking and foreign forwarding"—might be to highjacking, terrorism, and other "muscle" tactics.

The new bill would "further define" the national transportation policy by adding the following paragraph:

"It is hereby further declared to be the policy of the Congress that all modes of transportation subject to this Act shall be kept free of terrorism, extortion, racketeering, and similar unlawful or unethical business tactics, and to this end due regard shall be given in all cases to any evidence of the use of such tactics, or the likelihood of the use of such tactics, by any applicant for, or transferee or holder of any certificate, permit, or license issued or outstanding under this Act, or under any amendment thereto."

Passage of this amendment would be a "wise anticipatory step" against the day the crime committee's total



legislative program has the effect of driving racketeers out of gambling, Senator O'Connor said.

"When the prohibition laws were repealed, other vulnerable industries received a sudden influx of hoodlums and terrorists, and the same thing may well happen when interstate gambling is effectively curbed," he continued. He said the crime committee feels it desirable to back the Interstate Commerce Commission "with the full weight of a congressional directive," so there will be no question of the commission's power to deal with such problems when they arise.

### New Cost Study Form Is Proposed by I.C.C.

The Interstate Commerce Commission has submitted to Class I railroads a special form which the commission proposes to use in the compilation of cost studies. The new form is to be assembled and filed with the I.C.C. for the month of October 1951. It consists of a special report on freight station costs and other performance factors.

A notice announcing the new form was issued July 31. According to this notice, any "interested party" has until August 24 to file "written views or arguments" in connection with the proposed report. At that time, unless found otherwise necessary, an order

will be entered requiring the special report to be filed in the form now proposed.

### New Auto Rates Delayed Again

The Interstate Commerce Commission has now set November 5 as the effective date of its outstanding order requiring an adjustment of railroad freight rates on new automobiles. The order had previously been scheduled to become effective September 4.

The postponement order cited a petition wherein the New York Central asked for more time to prepare necessary tariffs. (*Railway Age*, July 23, page 54.)

### "Essential" Over-Weight Trucks Can Get Permits

Defense Transport Administrator James K. Knudson announced last week that the governors of 47 states have agreed to cooperate in a plan where states will issue, under special circumstances, over-size and over-weight permits for truckers. The permits will be for movements "essential to defense production," but will not include shipments for the military departments.

A plan similar to this, covering military traffic, was worked out last year between the various states and the

### WALTER THOMPSON TO DO PRINCESS' TOUR PUBLICITY

Walter S. Thompson, former director of public relations for the Canadian National, who retired last October 22, will be in charge of press, radio and picture relations for the forthcoming Canadian tour of Princess Elizabeth and her husband, the Duke of Edinburgh. (An evaluation of Mr. Thompson's contribution to advancement of railroad public relations appeared in *Railway Age*, October 14, 1950, page 20.)

Mr. Thompson handled press arrangements for the 1939 tour of Great Britain's royal family. Other notables whose Canadian tours he chaperoned include the Duke of Windsor (then the Prince of Wales), Winston Churchill, Field Marshall Montgomery, David Lloyd George, Earl Baldwin and Queen Marie of Rumania. Princess Elizabeth is expected to arrive in Canada early in October for a three-week cross-country tour.

Military Traffic Service, Department of Defense.

Motor carriers finding themselves "under special circumstances" must apply to a field office of the Bureau of Motor Carriers, Interstate Commerce Commission, for an over-weight permit. The bureau will investigate, and, if convinced of the need, will so certify to the proper state official. The states will act on these requests according to their own judgment.

In announcing this new plan, the D.T.A. said strict screening of requests for special permits "will effectively limit relief to those movements which cannot, without dangerous interruptions to defense production, be made to conform to existing state requirements." D.T.A. does not foresee any very extensive use of the new arrangement.

### C.A.B. Proposes New Mail Pay Rate for Air Lines

The Civil Aeronautics Board has proposed that the nation's four major air lines be paid 45 cents a ton-mile for carrying mail. The new rate would be retroactive to January 1 of this year, and, according to an announcement by the board, would be "free of any subsidy to the carriers from the government."

In April the C.A.B. recommended a temporary mail pay rate of 42 cents a ton-mile for the four major air carriers. The present finding was made after further conferences with the various parties. It is not expected that the new rate will be suspended.

For the period prior to January 1, 1951, the C.A.B. proposes a final settlement with the four air lines on the basis of 63 cents a ton-mile. This settlement, together with the 45-cent rate

### Proposed Scale of First-Class (Class 100) Rates, as Promulgated by the Interstate Commerce Commission in Appendix 18 of Its July 31 Report in Docket No. 28300, Class Rate Investigation, 1939

(For details of the commission's report, to which the accompanying scale was attached, see *Railway Age*, August 6, page 41.)

Miles	Cents per 100 lb.	Miles	Cents per 100 lb.	Miles	Cents per 100 lb.
5	58	480	226	1500	445
10	64	500	231	1525	450
15	69	520	236	1550	455
20	73	540	241	1575	460
25	76	560	245	1600	465
30	80	580	250	1625	470
35	83	600	255	1650	475
40	86	620	260	1675	480
45	89	640	265	1700	485
50	91	660	270	1725	490
55	94	680	275	1750	495
60	96	700	280	1775	500
65	99	720	285	1800	505
70	101	740	290	1825	510
75	103	760	295	1850	515
80	106	780	300	1875	520
85	108	800	305	1900	525
90	110	825	310	1925	530
95	112	850	315	1950	535
100	114	875	320	1975	540
110	118	900	325	2000	545
120	122	925	330	2025	550
130	126	950	335	2050	555
140	129	975	340	2075	560
150	133	1000	345	2100	565
160	136	1025	350	2125	570
170	140	1050	355	2150	575
180	143	1075	360	2175	580
190	146	1100	365	2200	585
200	149	1125	370	2250	595
210	153	1150	375	2300	605
220	156	1175	380	2350	615
230	159	1200	385	2400	625
240	162	1225	390	2450	635
260	168	1250	395	2500	645
280	173	1275	400	2550	655
300	179	1300	405	2600	665
320	185	1325	410	2650	675
340	190	1350	415	2700	685
360	196	1375	420	2750	695
380	201	1400	425	2800	705
400	206	1425	430	2850	715
420	211	1450	435	2900	725
440	216	1475	440	2950	735
460	221			3000	745



since January 1, would require the four carriers to turn back to the government approximately \$5,000,000 in overpayments.

The four air lines involved in the board's decision are American, United, Eastern, and Trans World Airlines.

## Freight Car Loadings

Loadings of revenue freight in the week ended August 4 totaled 813,366 cars, the Association of American Railroads announced on August 9. This was a decrease of 6,509 cars, or 0.8 per cent, compared with the previous week; a decrease of 24,064 cars, or 2.9 per cent, compared with the corresponding week last year; and an increase of 96,503 cars, or 13.3 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended July 28 totaled 819,875 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS For the week ended Saturday, July 28			
District	1951	1950	1949
Eastern .....	140,077	149,547	125,682
Allegheny .....	172,323	177,568	138,546
Pocahontas .....	64,877	62,271	48,187
Southern .....	122,081	123,758	107,211
Northwestern .....	140,979	141,341	131,017
Central Western .....	119,371	127,520	116,302
Southwestern .....	60,167	63,006	57,099
<b>Total Western Districts .....</b>	<b>320,517</b>	<b>331,867</b>	<b>304,418</b>
<b>Total All Roads .....</b>	<b>819,875</b>	<b>845,011</b>	<b>724,044</b>
Commodities:			
Grain and grain products .....	59,942	62,534	65,611
Livestock .....	6,778	6,907	8,537
Coal .....	146,257	154,673	109,661
Coke .....	17,260	15,126	9,166
Forest products .....	49,015	48,633	40,601
Ore .....	93,096	85,326	74,422
Merchandise l.c.l. .....	69,735	84,293	87,143
Miscellaneous .....	377,792	387,519	328,903
<b>July 28 .....</b>	<b>819,875</b>	<b>845,011</b>	<b>724,044</b>
<b>July 21 .....</b>	<b>804,570</b>	<b>830,076</b>	<b>718,516</b>
<b>July 14 .....</b>	<b>779,454</b>	<b>789,406</b>	<b>724,183</b>
<b>July 7 .....</b>	<b>588,246</b>	<b>553,910</b>	<b>595,321</b>
<b>June 30 .....</b>	<b>821,615</b>	<b>783,520</b>	<b>644,182</b>
<b>Cumulative total 30 weeks .....</b>	<b>22,909,549</b>	<b>20,903,153</b>	<b>21,499,146</b>

## R.E.A. Fails to Get More Interim Rate Relief

The Interstate Commerce Commission has denied the Railway Express Agency's petition for authority to raise its "interim-relief" rate increase by one cent—from 20 cents to 21 cents per shipment on l.c.l. express traffic. The 20-cent increase was authorized by the commission last April in a report on the interim-relief phase of the Ex Parte 177 case.

In asking for authority to make the surcharge 21 cents, R.E.A. called the commission's attention to recent increases in its wage bill and other costs (*Railway Age*, July 16, page 57). The commission's denial order noted that the proposal was opposed by various shipper interests; and it said that reasons listed by R.E.A. in support of the proposal "do not constitute sufficient cause for granting the petition."

At the same time, the commission



PIERRE R. BRETEY, president of the National Federation of Financial Analysts Societies, tries his hand at a Whiting Trackmobile on the Chicago & Eastern

Illinois' Danville shop track. The Trackmobile is used to switch cars within the shop, which is currently completing an order for 200 hopper cars

issued another order in the case, setting it for oral argument on October 10 at the commission's Washington, D. C., headquarters. That order also stipulated that no proposed report would be served in the proceeding, and that briefs would be due August 20, with reply briefs due September 10.

## Waybill Studies

Additional waybill studies have been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. They are: Statement No. 5131, Territorial Distribution of Traffic and Revenue by Commodity Classes—Terminations in 1950; and Statement No. 5132, Mileage Block Distribution of Traffic and Revenue in Classes 501 through 597 of the Manufacturers and Miscellaneous Group (by Commodity Class, Territorial Movement and Type of Rate)—All Terminations in 1950.

## First Daytime Air Coach Service Approved by C.A.B.

The Civil Aeronautics Board has authorized National Airlines to establish daytime air coach service between New York and Miami for a one-year "experiment." One-way fare for this nonstop four-hour flight will be \$58.00. Regular fare for the trip is \$75.70.

This is the first daylight coach service to be approved by C.A.B., although applications have been submitted by "several" other air lines.

The board said the \$58 fare will not be "unjustly discriminatory" and the day coach authorization is "a further step in the coach fare experiment begun by the night coach services."

Rail coach fare from New York to Miami is \$41.07, and the trip is scheduled at approximately 25 hours.

Chan Gurney, a member of the board, did not agree with the majority decision in favor of the low-fare daytime flights. Mr. Gurney said such service will be "detrimental to the progress of the air line industry toward financial self-sufficiency."

## 336 Locomotives Junked for Scrap

By breaking up 336 retired locomotives, the railroads moved "tons of desperately needed iron and steel scrap to mills and foundries in May," the National Production Authority said in a recent statement. Thirty railroads contributed to the achievement.

Four of them contributed more than 75 per cent of the scrap involved, according to N.P.A. The four, and the number of locomotives scrapped by each, were: Pennsylvania, 71; Louisville & Nashville, 70; Delaware & Hudson, 62; Baltimore & Ohio, 56.

## MORE NEWS ON PAGE 67

Additional general news appears on page 67 followed by regular news departments, which begin on the following pages:

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Left—The yardmaster sits at this console in his office and directs operations of the entire yard by conversations over



the talk-back loudspeaker system. Right—Talk-back speakers like this one are located throughout the yard

## How Loudspeakers Expedite Yard Operation

### On the Wabash at Moberly

#### **Benefits of new communications system also extend to road operations**

**A**t Moberly, Mo., the Wabash has made an extensive installation of yard communications equipment which has facilitated yard operations and, therefore, improved freight service to the public. Moberly, located in the north central part of Missouri, is the crossroads of several Wabash lines: east to St. Louis, 147 miles; west to Kansas City, 131 miles; northwest to Omaha, 267 miles; north to Des Moines, 193 miles; and northeast to Decatur, 212 miles.

Moberly is a terminal for freight trains to or from all these five lines. About 20 to 28 freight trains arrive here daily, and about the same number depart. Six of the trains enroute between St. Louis and Kansas City are held in the yard just long enough to take off certain blocks of cars, and to add others. The remaining 15 to 22 trains daily are broken up, classified, and made up as entirely new trains. Flat switching is used throughout the yard. The traffic varies from 2,300 to 2,800 cars daily inbound, and the same number outbound. In this yard, the Wabash has two diesel switch engines which are in service around the clock daily. Two steam switch engines are in service the third trick, and one such engine on each of the first two tricks. Three switch crews are on duty the first two tricks daily, and four crews the third trick.

The yard is just west of the Moberly station, and extends east and west along the north side of the main track of the line toward Kansas City. This yard has nine long tracks and various short tracks, the overall length of the yard being about 1.5 miles. Shops, enginehouses, car repair tracks and storehouses are located just north of this yard. A second yard, with seven tracks about 3,300 feet long, extends northward and connects with the Des Moines line.

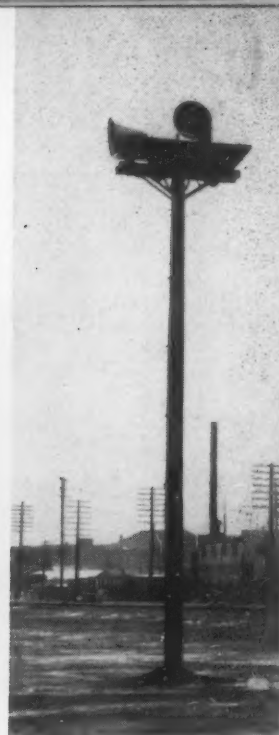
#### **New Communications System**

In the new communications system, 59 outdoor type double-unit talk-back loudspeakers are located along the switching leads and various other places throughout the yard and terminal area, where switching crews, switchmen, car repair men and other men are at work. Three of these speakers are located in the roundhouse. Also, 12 single-unit indoor type talk-back loudspeakers are located in buildings and offices, such as the yard office, switch shanties, car repair foremen's office, and storekeeper's office. All of these 71 talk-back speaker locations are connected by circuits to a control panel on the desk in the yardmaster's office which is in a tower about 52 ft. above ground level, at a location where he can see switch engines at work in most all of the yard area. As shown in the picture, this office is on top of the peak of the roof of the shop, this being the only location that would give a view of the yard, as well as other tracks to the north and west of the shop. A new steel structure, built up from foundations in the ground, extends up through the shop building to support the new office.





Left—The chief dispatcher uses the intercom system to talk to yardmaster, enginehouse foreman and superintendent.



Right—Big speakers like these are used for paging only. Group paging has proved of considerable advantage

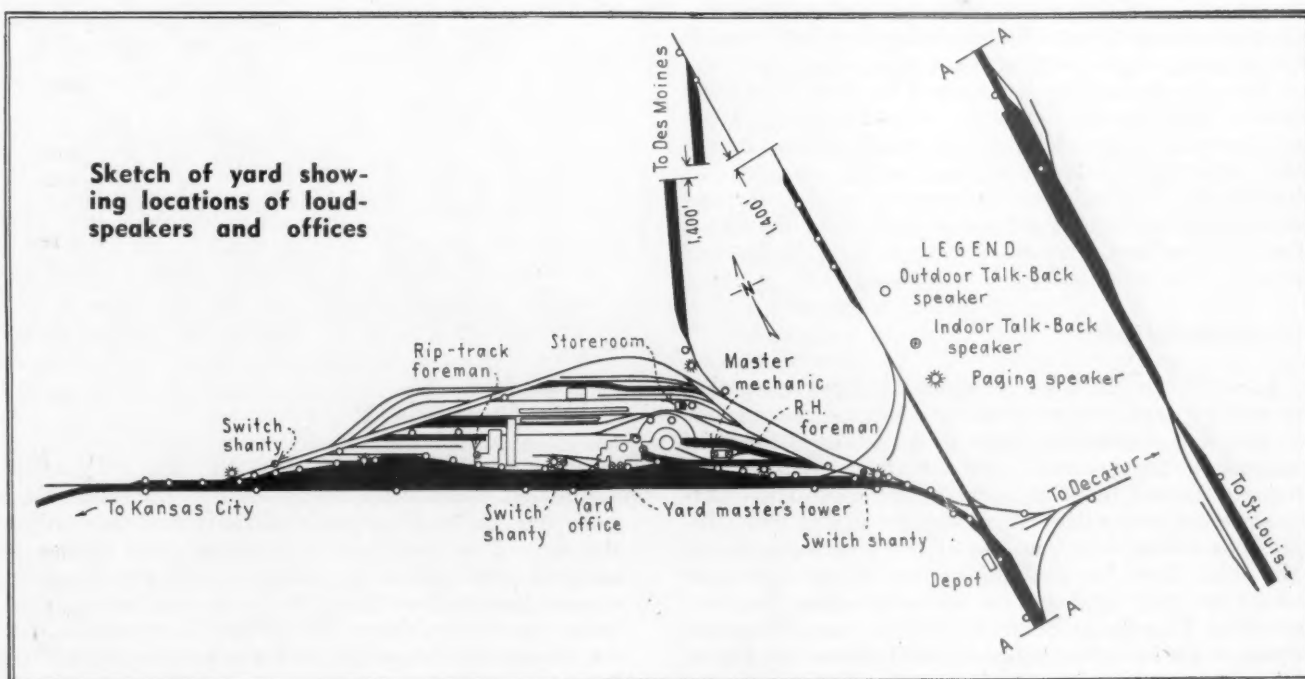
On the yardmaster's control console, there is a key and an indication lamp corresponding with each of the 71 talk-back speaker locations. If he wants to talk to a man within range of a certain talk-back, he pushes down on the key corresponding with that talk-back. When he stops talking, he takes his foot off the foot switch, which connects the incoming circuit to the loud-speaker in the center of the panel on his console, so that he can hear the answer made by the man at or near the talk-back location being called.

Along the switch leads, where crews work when classifying cars, the talk-back locations are about 150 ft. apart. The range of the talk-back under reasonable conditions is such that a switchman or crew foreman can hear and readily understand a talk-back speaker at a distance of about 50 to 75 ft. Also, when he is within

about 50 to 75 ft. of a talk-back, his voice, in reply, will be picked up and transmitted to the yardmaster. With favorable conditions, these distances would be 100 to 150 ft. Thus, brief conversations, back and forth, to secure information or issue instructions are made quickly and without the man in the field being required to go near the talk-back.

If a switch foreman, switchman or other employee, wants to call the yardmaster, he goes to a talk-back location, pushes a button and releases it. When the yardmaster is ready to answer, he presses the key under the lighted lamp. The conversation is then conducted as previously explained.

If the man being called does not answer, the yardmaster can "page" him by either of two methods. First, by throwing a corresponding key, the yardmaster can







Yardmaster's office is up where he can see all over the yard

establish "group" paging of 2 or 6 talk-backs in a given area, and make the call through all these talk-backs in the group. If this does not bring a response, the yardmaster can then throw a corresponding key that connects his outgoing set to paging loudspeakers. There are six of these speakers, each having two or three large-sized 25-watt loudspeakers with 21-in. diameter horns. These speakers can be heard for several hundred feet. A possible objection to using these large paging speakers during the night hours is that the sound carries so far that residents in the vicinity might complain. For this reason, the new practice of group paging with talk-backs has proved to be of considerable advantage.

#### Intercom System

In addition to the talk-back speaker and paging speaker system, the new communications facilities also include an intercom system, with units in the offices of the chief dispatcher, the yardmaster, the master mechanic, the trainmaster and the division superintendent. This intercom system centers in the master set in the chief dispatcher's office, shown in one of the pictures herewith. The chief dispatcher can call any one of the four other offices by pushing down on a corresponding key and speaking. Thus, he originates his call by voice. He pushes down on his key when he speaks, and allows this key to return to center position to listen.

The offices of the chief dispatcher, the superintendent and trainmaster are all on the second floor of the passenger station building. These three intercom sets are connected by one circuit. Hence, any of the three can call others by operating a corresponding key and talking directly into the speaker. If the chief dispatcher wants to call the yardmaster, he presses the key marked "YM" and talks. The yardmaster responds without operating either key or foot switch. When the yardmaster originates a call, he presses key marked "CD" which registers a light and sound buzzer on the chief dispatcher's set. When the chief dispatcher responds, he operates a talk-listen key and carries on the conversation.

#### Benefits of System

Prior to installation of the new yard communication systems, the yardmaster spent most of his time walking from one part of the yard to another in an effort to contact switching crews, car repairmen and other forces. As he could be at only one place at a time, he had difficulty in meeting changing circumstances. In too many instances he spent more time correcting troubles than anticipating difficulties and eliminating them before delays occurred. Now, the yardmaster stays in his elevated office and directs his staff.

Now, too, the yardmaster can keep in touch constantly with yard crews, to receive information on the progress of work underway, and to issue new directions based on changing circumstances. For instance, he may direct a crew to clear a lead so that an approaching train can pull in without delay. When an inbound road train arrives and stops at the yard entrance switch, the yardmaster uses the loudspeaker at that switch to tell the head brakeman the track number on which the train is to pull in.

A typical use: a switchman noticed a bad-order condition on the third car from the rear of a train as it was pulling into the yard. He used the nearest talk-back speaker to tell the yardmaster. The yardmaster used the speaker system to tell the car foreman. As a result, the defect was corrected promptly so that the car made connection for the outgoing train.

The fact that the yardmaster has contact with both the front and rear ends of trains entering or departing from the yards by means of the talk-back and paging speakers makes it possible to relay information from rear to front end or vice versa promptly, thus eliminating delays, especially in foggy weather.

On the six through freight trains daily between Kansas City and St. Louis, the principal yard work at Moberly is to take off and set on blocks of cars after which the train is coupled up ready to go. Previously, there was considerable delay in getting word to the engineman concerning the number of cars and tonnage on his train. Now, the yardmaster gives a brief statement via the loudspeaker nearest the engine, and the engineman is ready to go.

#### A Help to Dispatcher

Under previous practice, about the best estimate the yardmaster could make as to the departure time of a train was within 30 minutes of the actual time. Now that he can see and hear its progress every minute, he can look ahead 30 to 45 minutes to tell the dispatcher when a train will be ready to depart—and not miss by more than five minutes. This ability is a great help to the dispatchers. They can have everything prepared for trains to go at once when ready, and plan meets based

on fact—not on “called for 10 a.m.” Thus, the benefits of the yard communication system extend out on the road too. The benefits in expediting yard operations brought about by the communication system at Moberly have been such that the Wabash is considering similar installations at other yards.

This new communications system at Moberly was

planned and installed by the Wabash, under the direction of G. A. Rodger, superintendent signals and communications. The yardmaster's control console with relays in place and amplifier cabinet completely wired was furnished by R. W. Neill Company, Chicago. This company also furnished the intercom units, paging speakers, talk-back speakers and associated accessories.

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## How to Minimize Damage from Crankcase Explosions

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***Violent crankcase explosions normally comprise two steps, a primary explosion followed immediately and automatically by a secondary explosion. The latter is of the greater severity; preventing it is the key to keeping damage to a minimum. Why this is true, and what to do to eliminate secondary explosions, are told in this article.***

For as long as there have been diesel engines, the hazard of crankcase explosions has existed, and this hazard continues to grow with the increased use of diesel power.

In severity, crankcase explosions range from minor puffs to those causing serious injury to personnel and equipment. In one case, the explosion was violent enough to bulge out the sides of a locomotive to the extent that the sides had to be hammered in before the train could proceed through bridges.

Two papers dealing with the crankcase explosion problem were presented before the June meeting of the Oil and Gas Power Division of the American Society of Mechanical Engineers. One paper was by A. C. Cavileer, head of the large diesel engines branch of the United States Navy Internal Combustion Engine Laboratory of the Engineering Experimental Station at Annapolis, Md. The second was by G. W. Ferguson of the Texas Company, New York. This article is based on the material contained in both of these papers.

The ideal way to eliminate the crankcase explosion problem would be to build, maintain and operate diesel engines so that at no time would there develop any overheating sufficient to reach the ignition temperature of the contents of the crankcase. Unfortunately, this is not always possible with any make of engine or in any operating service. The next best thing, therefore, is to minimize the effects of the explosions that do occur by providing, for personnel and equipment, maximum protection from those effects.

The best way to attain this protection appears to be through mechanical design. Little or nothing can be done from a lubricating oil or fuel oil standpoint to prevent crankcase explosions so long as inflammable lubricants are employed.

The problem boils down to preventing what technical experts in the diesel field refer to as the *secondary* explosion. This is the explosion that automatically and quickly follows the initial, or *primary* explosion. It is not related to any second explosion that may take place as a result of starting an engine too soon after it has been shut down because of an earlier explosion.

### **What Causes Principal Damage**

Why the secondary explosion is responsible for most of the damage to equipment and most of the injuries to personnel in the overwhelming majority of cases, and why this secondary explosion occurs, can be seen by tracing the steps involved in a typical crankcase explosion.

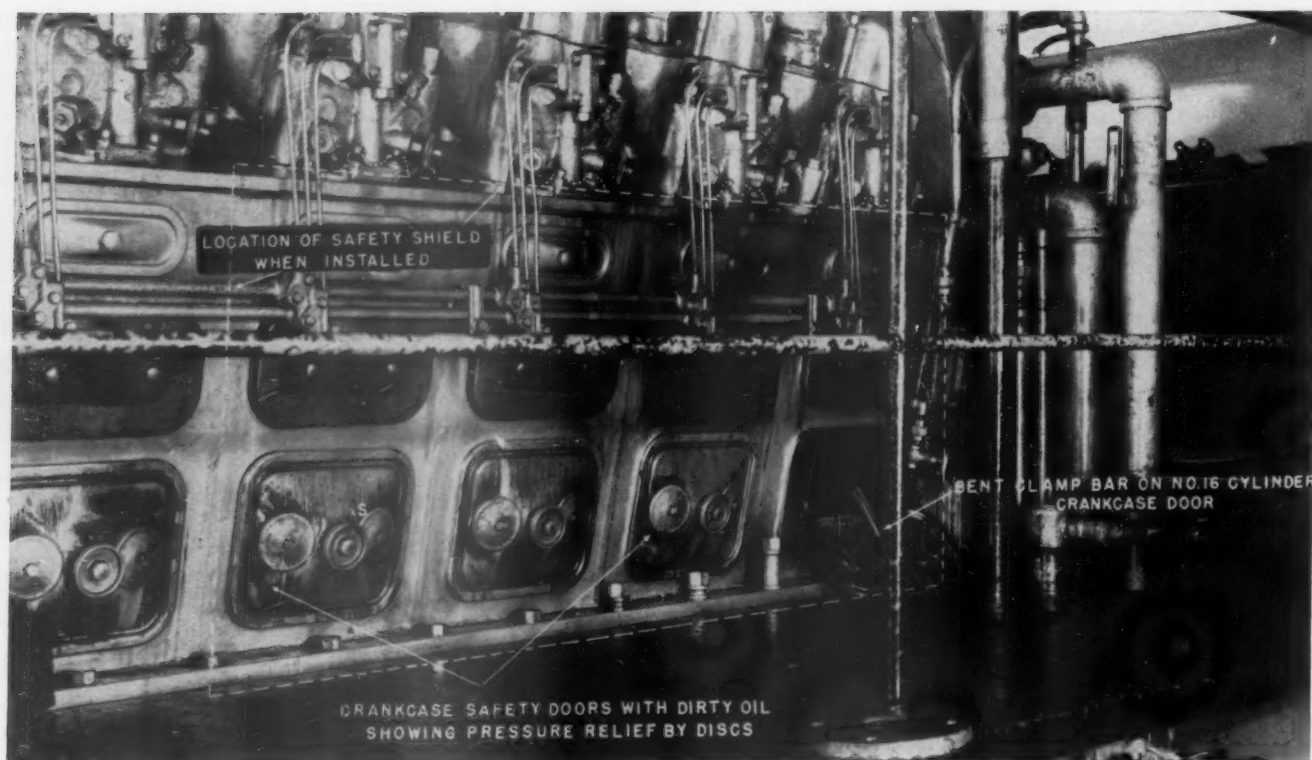
First of all, a source of heat above the minimum ignition temperature of the contents of the crankcase must be present in the crankcase. In the great majority of explosions, this heat is furnished from an overheated part, such as a siezed piston or an overheated bearing, although there are other possible sources that have been reported, such as “flame-torching” through lined-up piston-ring gaps.

This source of heat ignites the mixture of oil mist and air in the crankcase, causing the *primary* explosion. This may occur with or without any outward signs of trouble. In many cases operating personnel are forewarned of the approaching danger by large clouds of white smoke issuing from around the crankcase doors or by excessive engine vibration and noise.

The mixture which is ignited comprises air plus mechanically atomized oil droplets and perhaps vaporized petroleum products produced by the lube oil coming in contact with the overheated parts. Depending upon the air-fuel ratio, the ignition source, the shape and size of the enclosure, and other factors, a primary explosion occurs. This varies in intensity from a puff of white smoke to a severe explosion. Usually, all the factors do not occur just right to produce the more violent explosion.

If, at this point in the cycle, in the case of the more violent primary explosions, the crankcase can be vented to the atmosphere through adequate openings, excessive pressure will not build up in the crankcase. However,





Results of a crankcase explosion which occurred on an engine at the Naval Experiment Station due to a blower seizure under extraordinary operating conditions during a special test

when the expansion and escape of the gases due to the pressure and energy of the explosion are finished, the gas in the crankcase contracts and pulls a fresh supply of air into the crankcase. This inrush of air can furnish the necessary oxygen for the secondary explosion.

If the engine is equipped with relief openings which close immediately after the primary explosion, the engine can possibly be stopped in time to prevent any following explosions. Gasket or frangible-diaphragm-type relief valves, however, provide only for the relief of the primary explosion, and do not prevent the inrush of fresh air. Fresh air is likewise free to rush in when relief of the primary explosion is by a crankcase door blowing off or by some part of the crankcase rupturing.

The greater severity of the secondary explosion can be explained by the change in the richness of the oil mist and air mixture. The primary explosion occurs in a relatively rich and slow-burning oil-air mixture. The inrush of fresh air caused by the cooling of the primary explosion gases provides sufficient oxygen to form a leaner and more explosive mixture for the secondary explosion.

An interesting phenomenon following the primary explosion and tending to prevent the secondary explosion has been observed in a number of cases. The door which was blown off the crankcase was at the end of the engine opposite from the cause of the explosion. This is thought to be the result of the pressure in the crankcase increasing as the pressure wave progresses along the length of the crankcase. The secondary explosion did not occur because, as the gases contracted, the burned, oxygen-depleted atmosphere receded toward the closed end and thus prevented fresh oxygen from reaching the hot spot.

The U. S. Navy has under way a series of tests for the purpose of learning how best to be able to contain

the explosions that do occur and to limit as much as possible the effects of crankcase explosions and the fires which sometimes follow. The program includes the testing and development of adequate crankcase covers for all types of engines commonly used in the naval service that are known to be subject to crankcase explosions. It includes also tests on two-cycle-engine air-box covers, as this problem is similar. The tests were divided into two categories:

1. Test of explosion-relief doors designed to relieve the initial explosion pressure and thereafter to seal the crankcase from the inrush of fresh air which follows the explosion.

2. Test of plain doors to withstand the pressures of the crankcase while other relief means are operating to prevent excessive pressure rise in the crankcase.

Results of the tests showed that several otherwise satisfactory crankcase door installations were ineffective in providing protection against explosions. The most serious deficiencies were the method of securing the door to the engine, and the method and material used for the gasketing between the door and the door opening.

The setup for the test comprised an explosion chamber equipped with the crankcase door to be tested. Because the gas composition that exists in a crankcase was impossible to reproduce exactly, a mixture of chemically pure propane and air was used. Propane was selected because it has the highest rate of flame propagation of all the paraffinic hydrocarbons and should give as high an explosion pressure, or higher, than would be encountered during a typical crankcase explosion. The necessary measurements and steps were taken to insure a correct mixture of the propane and air in each test. A Maihak diesel-engine cylinder-pressure recorder with the drum driven by a belt from a motor was used to re-



Failed clamp bar of a door blown off the navy test tank during a test in which the maximum explosion pressure seldom exceeded 16 p.s.i.

cord combustion pressure. Ignition of the charge in the tank was by spark plug, and high speed movies were taken of the test.

The first test on several makes of doors dramatically disclosed what could happen when a severe crankcase explosion occurs.

Because of the weak construction, the strongback would buckle and collapse, and the door would fly violently from the test tank followed by considerable flaming gas and slam into the sand bag butt. Concussion from the explosion was severe; in one case nine panes of window glass were broken. No one would be safe anywhere in the vicinity of the engine where he could be struck by one of the doors or close enough to be burned by the flames which followed.

Surprisingly enough, the explosion pressure recorded during an explosion when a door was blown off seldom exceeded 16 p.s.i., giving a total force on the door of approximately 1,800 lb.

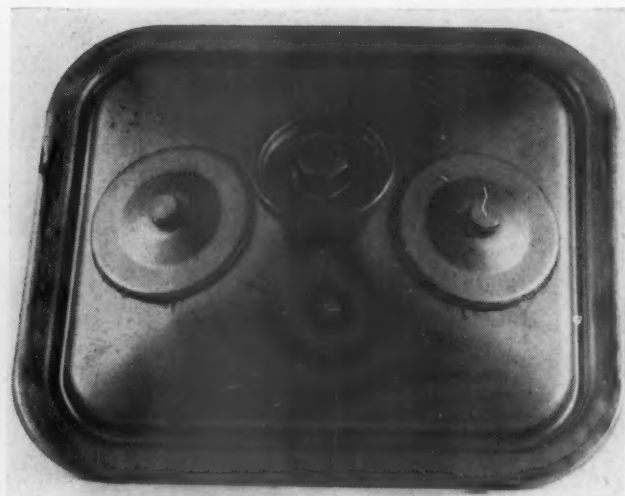
#### Relief Type Doors Are Helpful

Several styles of relief type doors were developed and tested, and the results on two types were the most significant. The first type of door had spring-loaded plates to relieve the excess pressure.

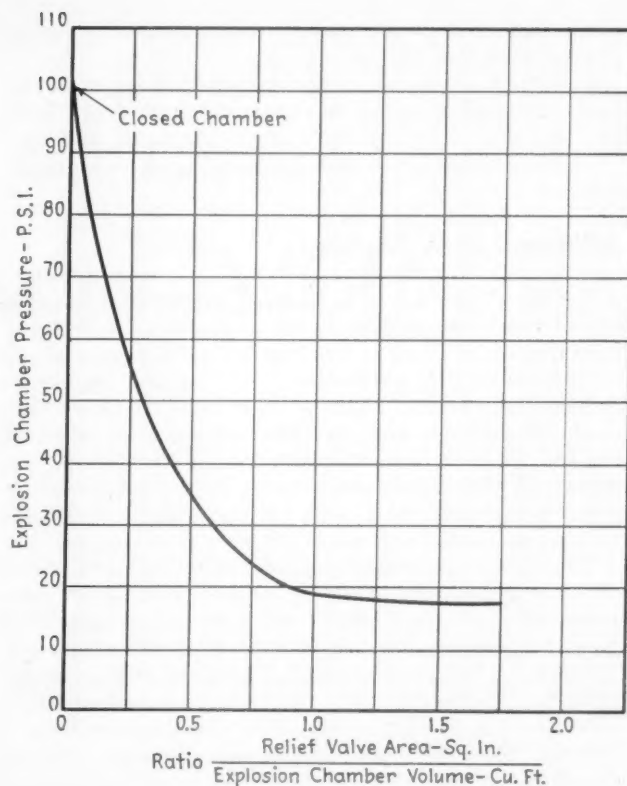
The results on this type door were quite satisfactory. When an explosion occurred, the relief plates opened and permitted the gradual escape of the explosion gases and prevented a build-up of excessive pressure. No violence or concussion accompanied the explosion, the only sign of which was a moderate sound similar to escaping air pressure. The recorded pressure was approximately 20 p.s.i.

It was found desirable to provide retainer rings for flame protection and to use good cementing technique for the cork gaskets on the plate because of the tendency of the explosion to blow the gasket from the plate or to burn the edge and face of the gasket.

A graph was plotted to show the explosion-chamber pressure for different ratios of relief-valve area to crankcase volume. From this it was concluded that it is de-



Crankcase door with spring-loaded plates to relieve excess pressure gave good results



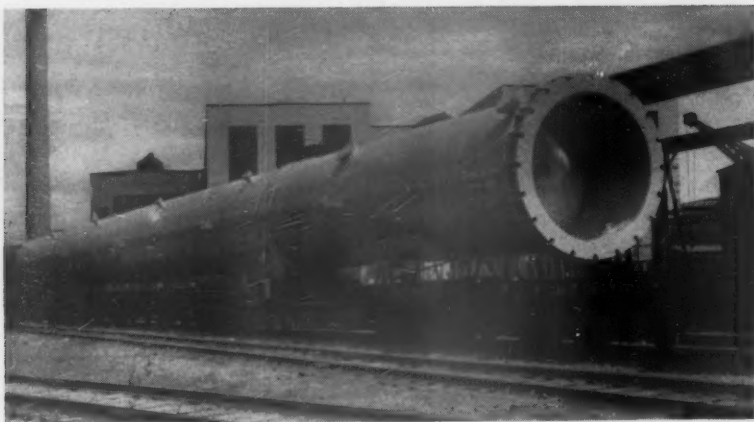
Effect of relief valve area on explosion chamber pressure

sirable to have approximately 1.5 sq. in. of relief-valve area for each cubic foot of crankcase volume.

The second door tested provided maximum gas escape area by being held onto the engine with a spring loaded strongback. Explosion pressure was relieved by lifting the entire door off the opening.

Results of this test were disappointing because, despite adequate relief of pressure and ability to reseal properly, the door was awkward to handle, too heavy, and when it did relieve an explosion, the concussion was severe. The flame present when the door lifted was greater for the same explosion condition than with the small relief





**THE CANADIAN PACIFIC USED A SPECIAL TRAIN**, traveling at a maximum speed of 25 m.p.h., to move this 165-foot extractor tower (left) from Montreal to Sarnia, Ont. The 130-ton tower, built by Canadian Vickers for the Polymer Corporation, was loaded on five flat cars, including two



well-type flats. At the right is another unusual shipment recently handled by the C.P.—a 30-ton bottling machine, said to be the largest in the world, unloaded at the C.P.'s Mile End yard for delivery to the Montreal plant of the Pepsi Cola Company

plates. Explosion pressure in the tank was approximately 15 p.s.i. with this door.

Reports of crankcase explosions which have occurred since the application of the improved type doors indicate that the explosions have been contained, and that the dangers to personnel and equipment have been greatly reduced.

#### **Additional Basic Factors**

The investigation by the Texas Company into the subject of crankcase explosions differed somewhat in scope from that of the Navy in that the Texaco tests were aimed at determining the basic causes of crankcase explosions and the basic factors affecting their severity. One of the most interesting, and perhaps startling, conclusions reached in these tests concerned fuel oil dilution. No significant differences were found in the minimum ignition temperature of a wide variety of lubricating oils, *even when diluted with up to 20 per cent diesel fuel.*

The Texaco study also found that the crankcase atmosphere of a normally operating diesel engine is not composed of explosive gases or an appreciable amount of oil vapor, but of a potentially inflammable mixture of air charged with particles of oil sprayed and thrown from the engine's moving parts. With commonly used lube oils only negligible quantities of oil vapor are present until flame or an overheated part vaporizes sufficient quantities of oil particles to form, locally, an inflammable mixture of oil vapor and air.

Vaporization of the crankcase oil by an overheated part and its subsequent condensation can contribute substantially to the formation of an inflammable mixture when the engine is shut down. White smoke is thought to result from the vaporization of the oil mist by a hot surface, and the subsequent condensation to form a finely divided oil mist.

Experimental work by Haber and Wolff, two European scientists, showed that the lower limit of inflammability of the condensed mists of oils is essentially the same as for the oil in the form of a vapor, but that the flame speed was less in the mists and decreased with increasing particle size. It was also indicated that the lower limit of inflammability of lubricating-oil mist compared closely with diesel fuel and other lower-flash-point hydrocarbons.

Tests conducted by the U. S. Bureau of Mines indicate

that decreasing the oxygen concentration of a mixture of air and oil mist will narrow the inflammability limits until a minimum oxygen concentration (about 12 per cent) is reached, below which flame will no longer propagate.

Certain changes in the crankcase atmosphere occur during primary and secondary explosions. Partial combustion of the oil vapor in the vicinity of a hot spot increases the fuel concentration and decreases the oxygen concentration because of the vaporization and partial combustion of the oil vapor in the vicinity of the hot spot. If sufficient energy is transferred from the hot part to the air-oil mixture before the oxygen concentration is reduced below the minimum for flame propagation, a primary explosion may occur. If this does not rupture the crankcase, and no additional air is supplied, the further reduction in oxygen concentration and the increase in oil vapor will render the mixture non-explosive.

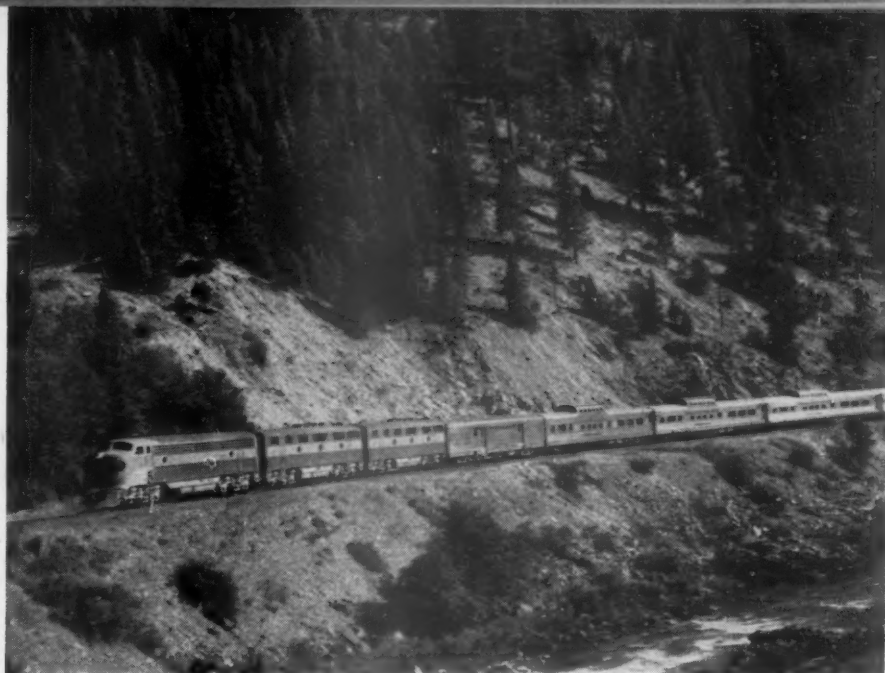
If there is a sufficient time lag before enough energy is transferred from the hot part to the oil-air mixture, the oxygen concentration is reduced below the propagation minimum because of the partial combustion of the oil vapor in the vicinity of the hot spot. This is attested by the many instances where overheated parts have not caused crankcase explosions.

The extreme heterogeneity of the mixture in the crankcase undoubtedly makes ignition a very complicated process. With an ignitor surface heated to 1,400-1,500 deg. F., in an air-oil mixture simulating that in a diesel crankcase, there is an appreciable delay before general ignition occurs. This delay is about the same for mixtures with large droplets as for those with a finely divided oil mist, but combustion is more complete with the finer mist. The minimum ignition temperature is from 1,400 to 1,500 deg. F., except for very lean mixtures where the minimum ignition temperature increases rapidly.

Over a wide range of oil-to-air ratios, the minimum ignition temperature is lowered by decreasing the air flow, and by increasing the mixture temperature and the ignitor size. As conditions for transferring heat from the point of ignition become less favorable, the mixture will ignite at a lower ignitor temperature. Therefore, improving the transfer of heat from the point of ignition will reduce the tendency for an explosion to occur.

Many long-distance passenger trains—like the "California Zephyr," shown at the right in Feather River Canyon—are more than earning their keep . . .

. . . But a lot of the local and branch line passenger trains which the railroads are still compelled to operate, even though the public no longer uses or needs them, are heavy contributors to the overall passenger deficit. The solution to this particular phase of the problem, Mr. Quinn suggests, may lie in giving the I.C.C. authority over discontinuance "of these exceedingly unprofitable passenger trains"



By **W. J. G. QUINN**  
Chairman, Committee on Statistics, Accounting  
Division, Association of American Railroads,  
and General Statistician, Southern

## What About the Passenger Deficit?

The passenger service deficit is one of the most serious problems that face the railroads today. The carriers should attack the problem systematically, with a view to eliminating this economic loss, or at least to making the passenger service pay its direct or out-of-pocket cost. If the problem is to be solved, it will also have to receive serious and sympathetic consideration by federal and state courts, by the Interstate Commerce Commission, by state railroad and utility commissions, by the shipping and traveling public, by rail security owners, by railway labor, and particularly by railway management.

Prior to the advent of the automobile, the "Iron Horse" enjoyed practically a monopoly of passenger transportation. Progressively, as production of automotive vehicles increased and additional roads were paved, the railways' portion of total passenger traffic decreased, so that by 1930 passenger service for the first time was operated at a loss. Since that date this passenger deficit, like a snowball rolling down hill, increased each succeeding year until 1942-1945. In postwar years the passenger service reverted to its prewar status, and was again operated at deficits ranging from \$139.7 million in 1946 to a peak of nearly \$650 million in 1949. In 1950 the deficit receded to \$508.5 million. The principal reason for the recession was the fact that the rail lines' passenger service revenue was augmented by retroactive mail pay of \$149 million, of which approximately \$107

million was applicable to the period from February 19, 1947, to December 31, 1949. The balance of \$42 million was earned during 1950.

### Restating the Deficit

Allocating to 1949 estimated retroactive mail pay applicable thereto of \$40 million, the restated deficit in that year would aggregate \$610 million. The 1950 deficit of \$508.5 million, if restated by eliminating \$107 million retroactive mail pay applicable to prior years, would aggregate \$615.5 million, and exceed the 1949 restated deficit by \$5.5 million. Revenue from passengers decreased \$47 million in 1950 over 1949, and indicates that, despite vigorous efforts, little progress has been made in solving the problem.

This passenger service deficit has attracted the attention of federal and state regulatory authorities, shippers and the general public, and has been mentioned prominently by the I.C.C. in its decisions in recent railroad revenue cases.

Passenger train operation involves not only transportation of persons, but of property or commodities. Attempts have been made to analyze the deficit to ascertain the amount and percentage thereof applicable to each of the two services, viz: persons and head-end traffic.

The I.C.C., in its Ex Parte 168 decision, using car-miles as a yardstick, calculated that head-end traffic incurred during the years 1936-1941, 1947 and 1948 from 53.73 per cent to 76.25 per cent of the passenger service

Abstracted from a paper read by Mr. Quinn at the 57th annual meeting of the Accounting Division at New York, June 12 (*Railway Age*, June 18, page 53).



deficit, the 1948 percentage being 66.61. Even during 1942-1945 and 1946, when passenger service collectively earned a net railway operating income, head-end traffic produced, on the same car-mile basis, deficits ranging from \$167 million to \$326 million.

The impossibility of dealing with this matter in a general way is best illustrated by the result obtained from the study conducted by the railroads and the Post Office Department during the test week, October 18-24, 1948. This study covered all passenger trains operating in the United States during that week. The mileage made and dimensions of each car in every train were obtained, as well as space allotted to or used by each class of traffic, i.e., passengers, mail, express, etc. Accurate car-foot-mileage data were secured. Based on this yardstick, "car-foot-miles," which was used by the railroads in the mail pay case (I.C.C. Docket 9200), it developed that:

69.37 per cent was applicable to transporting passengers; and 30.63 per cent was applicable to transporting head-end traffic.

Applying those percentages without adjustment to the 1948 passenger service expenses, taxes, equipment and joint facility rents of Class I railways, produced a cost for:

Persons .....\$1,383.3 million; and for  
Head-end traffic ..... 611.0 million.

Deducting revenues received from:

Persons of .....\$1,086.3 million; and from  
Head-end traffic of ..... 348.7 million,

indicates that the passenger service deficit of Class I railways in 1948 divides:

Persons .....\$ 297.0 million, or 53.14 per cent  
Head-end traffic ..... 262.3 million or 46.86 per cent

\$ 559.8 million

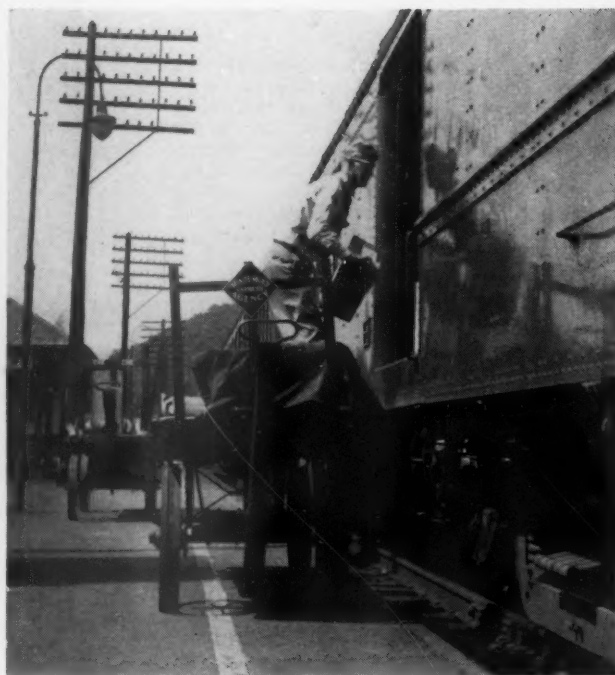
If the \$36 million (estimated) back mail pay applicable to 1948 is considered, the restated deficit of \$523.8 divides:

Persons .....\$ 297.5 million, or 56.80 per cent  
Head-end traffic ..... 226.3 million, or 43.20 per cent

\$ 523.8 million

A comparison of the head-end traffic percentage produced by using the car-mile basis, 66.61, and that obtained by using the "car-foot-mile" basis, 46.86, illustrates the fallacy of attempting any short-cut solution to this deficit problem.

If the rail lines had enjoyed all the traffic, and received the entire revenue (\$444 million) earned both by inter-



"In the past, railroads enjoyed substantial revenue from transportation of express in passenger trains," but "the picture has radically changed" with "substantial diversion of express . . .

city and local or suburban buses during 1950, that additional revenue would not have wiped out the rail lines' restated deficit, including 1950 retroactive mail pay, of \$615.5 million.

### Subsidizing the Mail

In the past, railroads enjoyed substantial revenue from transportation of express in passenger trains. The express picture has radically changed; the following facts brought substantial diversion of express to parcel post:

1. Expansion of parcel post service by increasing weights and dimensions of packages.
2. Parcel post rates, established and based on the 1925 dollar.

### Distribution of Intercity Passenger Traffic in the United States

Agency	1926	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1949 vs. 1926	
													Units	Percent
Millions of Passenger Miles														
Steam Railways	35,673	22,713	23,816	29,406	53,747	87,925	95,663	91,826	64,754	45,972	41,224	35,133	D 540	D 1.5
Electric Interurban	5,537	956	950	1,177	1,326	1,940	2,041	1,709	1,508	780	670	585	D 4,952	D 89.4
Inland Waterways	1,848	1,486	1,317	1,821	1,860	1,927	2,187	2,056	2,327	1,845	1,670	1,179	D 669	D 36.2
Private Automobiles	115,612	234,693	245,751	264,316	199,635	147,131	151,251	179,837	253,570	272,958	287,423	382,755	267,143	231.1
Buses	4,375	11,198	11,613	13,646	21,515	27,416	26,548	26,927	25,576	23,948	23,529	21,151	16,776	383.5
Air Carriers	-a-	678	1,041	1,370	1,418	1,632	2,264	3,362	5,910	6,075	5,941	6,761	6,761	-a-
Total	163,045	271,724	284,488	311,736	279,501	267,971	279,954	305,717	353,645	351,578	360,457	447,564	284,519	174.5
Percentage Distribution														
Steam Railways	21.9	8.4	8.4	9.4	19.2	32.8	34.2	30.0	18.3	13.1	11.4	7.9	D 14.0	D 64.9
Electric Interurban	3.4	0.3	0.3	0.4	0.5	0.7	0.7	0.6	0.4	0.2	0.2	0.1	D 3.3	D 97.1
Inland Waterways	1.1	0.5	0.5	0.6	0.7	0.7	0.8	0.7	0.7	0.5	0.5	0.3	D 0.8	D 72.7
Private Automobiles	70.9	86.4	86.4	84.8	71.4	54.9	54.0	58.8	71.7	77.6	79.7	85.5	14.6	20.6
Buses	2.7	4.1	4.1	4.4	7.7	10.3	9.5	8.8	7.2	6.8	6.6	4.7	2.0	74.1
Air Carriers	-a-	0.3	0.3	0.4	0.5	0.6	0.8	1.1	1.7	1.8	1.6	1.5	1.5	-a-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-a-	-a-

a Great Lakes, rivers and canals.

b Year 1926 estimated—Basis Public Roads Administration—Motor Vehicle Travel in USA.

c 1926 data insignificant—Not Compiled.

D Denotes decrease.

Source: Interstate Commerce Commission; Office of Chief of Engineers, U. S. Army; "Bus Transportation," and Civil Aeronautics Board.



... to parcel post." Transported "not at profitable express rates, but at non-compensatory mail rates," this traffic has been "responsible for a considerable portion of the passenger service deficit"

### 3. Increases in Railway Express Agency rates.

Despite these conditions, the rail lines still had to transport this traffic, not at profitable express rates, but at non-compensatory mail rates. Bluntly stated, during this period, the rail lines were actually subsidizing the U. S. postal service.

The mere facts that the I.C.C. granted the rail lines a 25 per cent increase in mail rates effective February 19, 1947, and that the Postmaster General agreed to pay retroactive mail pay for the period February 19, 1947, to December 31, 1950, both items totaling \$312 million for the nearly four-year period, substantiates the conclusion that mail traffic was responsible for a considerable portion of the passenger service deficit in the past, especially during postwar years.

Another fact that corroborates this conclusion is that in the mail pay case the rail cost exhibits showed that the total cost of transporting U. S. mail exceeded basic mail revenue, excluding the 25 per cent granted by the I.C.C.:

for 1947 by \$152 million, or 108.5 per cent;  
for 1948 by \$207 million, or 129.6 per cent; and  
for 1949 by \$264 million, or 148.3 per cent.

Summarizing and comparing express and mail revenue averages:

During 1936-41 express	decreased	62 per cent	from the 1925-30 period;
During 1936-41 mail	decreased	9 per cent	from the 1925-30 period;
During 1942-45 express	decreased	12 per cent	from the 1925-30 period;
During 1942-45 mail	increased	14 per cent	over the 1925-30 period;
During 1946-50 express	decreased	33 per cent	from the 1925-30 period;
During 1946-50 mail	increased	101 per cent	over the 1925-30 period.

The foregoing data give some indication of the extent to which [express] was diverted to parcel post by the shipping public. While the shipping public apparently benefited by using parcel post rather than express, nevertheless, the deficits incurred by the postal service resulted

in the general public paying additional taxes to meet these deficits.\*

The balance of head-end traffic consists principally of baggage, milk, newspapers, and a wide variety of articles usually carried in baggage cars on passenger trains, such as dogs, baby carriages, bicycles, etc. Due to the complexity of this service, just what detriment it is is not known, as this traffic is not readily susceptible to analysis. Nevertheless, it is felt that baggage service is responsible for a portion of the deficit.

### What About Unneeded Trains?

Another factor that is helping to swell the deficit tremendously is the local and branch line passenger service which rail lines are *compelled to operate*, irrespective of the fact that the public no longer uses or needs them. The railroads have cooperated with and will furnish the special committee inaugurated by the National Association of Railroad and Utilities Commissioners, composed of representatives of the I.C.C., state commissions, railroads and railroad labor, separate statements showing earnings and direct cost incurred by every passenger train operated at a deficit during May 1951.

Some rail shippers of freight have protested in recent revenue cases that the freight service should not be burdened with the passenger service deficit. Yet frequently the same shippers protest vehemently when passenger trains are consolidated, or schedules changed to effect operating economies. Again, when efforts are made to discontinue unprofitable passenger trains, shippers of freight appear at the hearings stating that their newspapers and mail deliveries may be delayed, and making other protests.

A decision by the U. S. Supreme Court on May 21, 1951 (*Railway Age*, June 4, page 66), has erected an

\*Mr. Quinn here quoted a Post Office Department statement that the department's operating deficit on parcel post alone in 1949 was \$104,906,000—8.9 cents per parcel, 26 cents on each dollar of revenue, and \$1.43 on each 100 lb. handled.



other barrier to the rail lines' program of solving one of the principal reasons for the passenger deficit, viz.: Discontinuance of local and branch line passenger trains no longer used or needed. It is a trifle early at this time to determine just what steps can be taken to mitigate the effect of this decision.

It has been suggested that the only way the railroads will be successful in discontinuing local and branch line trains would be for the Interstate Commerce Act to be amended so as to give the I.C.C. authority over discontinuance of these exceedingly unprofitable passenger trains.

### Individual Studies Needed

The writer believes the deficit problem can only be solved if studies are conducted by each individual railroad, of the services rendered by its passenger trains in handling both persons and commodities, somewhat along the lines of the study prepared for the mail pay case, which gave an excellent insight into just what each of the services—persons, mail, express, baggage—contributed to the deficit. Endeavor should be made by such study to ascertain just what revenue each service earned, and the direct cost of performing each service. When such data are compiled, each road would be in a position to initiate economies requiring such action that only become apparent or visible when such details are available. Furthermore, each line could consider, if practicable, whether the revenue received from each service should be repriced with a view to making each service pay at least its direct or out-of-pocket cost.

With the railroads vigorously advancing the matter along that line and providing they receive the assistance and sympathetic consideration of courts, regulatory bodies, labor, the shipping public and other interested parties, the problem may be solved—at least to the extent of making passenger service pay its direct or out-of-pocket costs.

## A Successful Centennial

A newspaper columnist recently wrote: "If there is anyone in mid-America who does not know that the Illinois Central is celebrating one hundred years of service to mid-America, he would have to be deaf, dumb and blind."

Half way through its centennial year the Illinois Central has taken time to look back upon its well-laid program for celebration of the centennial, and has found it to be highly successful.

Because centenaries are becoming almost commonplace, companies wanting to attract attention in the celebration thereof must draw up a program which is "unique, dramatic and appealing." The I.C.'s program was described in detail in *Railway Age* of February 12, page 88.

During the first half of its centennial year the road has produced approximately 5,000 pieces of display material which have been made available to business houses, banks, libraries and I.C. local offices. According to the road, "In many cases competition has been established between local business men for the outstanding display saluting the Illinois Central's centenary and prizes awarded by the local chambers of commerce."

Regarding its policy on "tie-in" advertising, the railroad observes: "Shortly before the centennial year began, the Illinois Central sent several thousand announcements to its suppliers, banks, newspapers, magazines, business and civic clubs, advertising agencies, and companies which were also celebrating some special anniversary. These announcements told of the coming centennial of the Illinois Central and invited them to tie their participation into the railroad's program. Particularly emphasized was the fact that the Illinois Central did not desire any organization or company to undertake any additional expense merely because of the business relationship between it and the railroad."

The announcements suggested that such tie-in participation should be undertaken only when there was a mutual advantage for doing so. The result of this consideration has paid enormous dividends and the salutary advertisements complimenting the railroad's achievements during the past century and extending best wishes during the coming century have been almost beyond conception."



A VISITOR FROM FRANCE, Edouard Paul Lecluse, railroad equipment manufacturer (left), studies a model installation of Honeywell car temperature control, as Paul C. Sharp, sales manager of the international division of the Minneapolis-Honeywell Regulator Company (right), explains details of the system. Mr. Lecluse is one of a group of French railway equipment officers touring U. S. plants under the guidance of William R. Boynton (center), project manager for the Economic Cooperation Administration

# Gurley and Deramus View the Record Kansas Flood

*In letters to their stockholders, reproduced here by special permission, the presidents of the Santa Fe and Kansas City Southern report on the record flood and its effect on their railroads*

## SANTA FE

CHICAGO, ILL., JULY 23, 1951

### TO THE STOCKHOLDERS:

I returned to the office this morning from an inspection trip of our lines in Kansas and Missouri and write to tell you of high water and flood damage in those states—especially in Kansas.

There were severe rains during June. We had high water difficulties and traffic interruptions in the drainage of the Kaw and along Walnut Creek, a tributary of the Arkansas river. In Missouri we had some troubles at crossings of streams which flood into the Missouri. We had reinstated normal train service almost everywhere by July 9.

During the evening and night of July 10 there were terrific rains in Kansas—for instance, six to seven inches in the vicinity of Emporia. These rains affected the territory drained by the Kaw, the Osage, and various branches of the Neosho. All of our lines lying to the east of a line drawn through Newton-Wichita, Kansas, were damaged sufficiently to prevent train operation. The Kaw assumed destructive flood proportions, exceeding the height of the disastrous flood of 1903 by five or six feet at Kansas City, Kan.

Following the disastrous flood of 1903 the Kaw Valley Drainage District was created—its principal purpose being to protect land and property in the Kansas City, (Kan.), area. Santa Fe lands and property were a substantial part of the lands and property protected by dikes built by the Kaw Valley Drainage District. The design and height of the dikes were based upon protection against flood waters of the proportions of 1903.

Early in the morning of July 13 the Kaw in the vicinity of Kansas City, Kan., was substantially higher than the dikes, and large areas were inundated, including our valuable terminal known as Argentine. In some locations there was as much as 22 feet of water over our track. Fifty-one diesel locomotive units were under water, as were some steam engines and some 4,000 freight cars. There was about two and one-half feet of water in our shops at Topeka and much of the line from Topeka to Kansas City, which is in the Kaw Valley, was under water. Service on our transcontinental line was suspended between July 10 and July 20.

The combination of (a) revenue losses, and, (b) increased expenses, produced by these flood waters will



The Kaw River flood water covered the Santa Fe's Argentine yard to a depth of more than 20 feet on July 12 and 13. These are some of the 400 cars, silted and derailed, left by receding waters in front of the Argentine car shops. Wreckage from several residences was found in the yard

amount to some millions of dollars. It has been impossible in the time that has elapsed since the beginning of the trouble to form anything like an accurate estimate. The damage was that incident to the cutting action of water and the damage that is implicit in equipment and property being under water. The 51 diesel engines, for example, were not damaged as damage is inflicted by the force of impact incident to a serious derailment, but batteries were severely damaged or ruined—battery damage will probably be about \$4,000 per engine. Other than that, the principal "repairs" to the diesels will be drying of motors and the removal of mud and slime, especially from moving parts. The principal damage to freight cars was that incident to water, mud and slime in journal boxes, in brake cylinders, and in air brake valves.

The money loss, of course, is serious, yet I feel warranted in assuring you that in the light of the volume of our traffic in 1951, it will not be "too serious"—I appreciate that it is difficult to make an accurate distinction between "serious loss" and "not too serious loss."

Our organization, following the sudden and terrific rains on July 10, so controlled all train movements that there were no derailments. While several passenger trains, carrying hundreds of passengers, were held at outlying stations for as long as two days, the passengers were well cared for—they appreciated the circumstances, and there have been no serious complaints.

One cannot forecast now the amount of damage to inundated shipments in freight cars, nor can we say now what our liability may prove to be under applicable liability laws.

Now as to the future—what to do in the light of these high waters and this destructive flood.

In the places which may be described as those "out in the country" we should make such improvements as increasing bridge openings, and in low places raising the track to higher elevations. These are the procedures which we have followed historically when experience has demonstrated that the changes are necessary. In other areas, notably in the valley of the Kaw, our future course will be decided upon following conferences in which the Army Engineers and interested communities will participate. Since the days when the Kaw Valley Drainage District was formed, the Congress, through passage of various flood control acts, has charged the Army Engineers with certain obligations for plans and has made certain



appropriations for the control of flood waters. The President of the United States and various other federal officers have made inspection of these areas since July 13 and there is a meeting scheduled at Kansas City, July 25, to consider what should be done. This meeting will be attended by representatives of the federal government, the states, the communities, and individual companies. My purpose is to attend this meeting. I am quite confident that measures will be taken which will protect us against a repetition of the 1951 flood waters.

Sincerely,

F. G. GURLEY

### KANSAS CITY SOUTHERN

*[This letter was accompanied by a map showing K.C.S. facilities in the Kansas City area, and clearly indicating in colors the parts flooded.]*

KANSAS CITY, MO., JULY 30, 1951

TO THE STOCKHOLDERS:

The Kansas City flood situation has been the subject of so much publicity that I feel a report concerning its effect upon the property of your company is apropos.

Our first difficulty from high water came about by reason of the Blue river overflowing its banks in the Blue Valley Industrial District, necessitating discontinuance of main line operations through that district beginning at about 11:00 p.m., Wednesday, July 11th. Northbound trains were turned back south at Grandview on the southern outskirts of Kansas City, and passengers, mail, express and baggage were handled between that point and the Union Station by bus and truck. Some delay also occurred to freight service by reason thereof.

This situation continued through Thursday, July 12th, and at noon July 13th it was necessary to discontinue operations into Grandview from the south because of water from the Marais des Cygnes river overrunning about a mile of our main track near our bridge 73 miles south of Kansas City. The flood at this point subsided, the track was temporarily repaired, and main line operations were resumed into Kansas City at 2:30 a.m., Monday, July 16th; the Blue river having returned within its banks in the meantime. From that time on, our main

line operations have not been seriously affected by high water conditions.

Water began flowing over the dikes into the Armourdale district about five o'clock in the morning of Friday, July 13th, prior to which it had already submerged a good part of Argentine, located south of Armourdale across the Kansas (Kaw) river. Both Argentine and Armourdale were completely inundated, and about ten o'clock Friday morning water began flowing over the east dike of the river into the Central Industrial District in which our freight depot and Henning Street yard are located. Later, flood water completely covered the Fairfax Industrial District which is located west of the Missouri river north of the mouth of the Kaw.

The Northeast Industrial District, where our company has assembled large industrial acreage, and where our main train yards are located, escaped the difficulties encountered elsewhere.

None of our locomotives were caught in the flood, and we succeeded in removing all but about 100 freight cars from the area that became inundated. Some of these cars were derailed and overturned by the onrushing waters. Rehabilitation work began as soon as receding waters permitted. There is still a great deal of work of this nature yet to be done. Limited service at our freight-house was restored July 26th.

Our operating expenses for July and for several months hereafter will be unfavorably affected by reason of the costs incurred in removing earth and debris from tracks and right of way, rerailing and reconditioning of cars, filling holes and restoring embankments, replacement of frogs, switches, rails, ties and signals, realigning and reballasting tracks, reconstruction, renovations and refurnishing of buildings, disruption of road and yard train and car movements, and all of the other abnormal items incident to a situation of this kind. Furthermore, the volume of our freight and switching business is being, and no doubt will continue to be, adversely affected by reason of the restricted output on the part of a large number of industrial concerns, some of which have gone out of business entirely.

As nearly as can be determined at this time, the loss to your company will approximate one million dollars.

Respectfully submitted,

W. N. DERAMUS



Steam locomotives parked near the Argentine roundhouse were heavily coated with silt. The high-water mark is visible on a line with the top of the tenders. At the time this picture was taken, the waters had started to recede

An old tie, sawed in-  
to three sections by a  
Wooley Tie Cutter,  
is removed from track



## Tie-Renewal Decline Stopped in 1950

*Continuing decrease in use of untreated ties was offset  
by slightly larger number of treated crossties installed*

Two significant facts overshadow all others contained in the tie-replacement statistics for 1950, recently released by the American Railway Engineering Association:

(1) For the first time since records became available in 1917, the number of untreated crossties used in track maintenance has dropped below one million; and

(2) The latest decline in the total number of ties laid annually in replacement, which began in 1944, and which was only slightly less precipitous than that which occurred between 1929 and 1933, was halted at the record low total of 1949.

In stopping that decline, tie renewals on Class I railroads in the United States in 1950 inched upward 270,807 to a total of 30,492,853. This figure includes 826,726 new untreated ties (the lowest number on record); 29,383,892 new treated ties; 282,192 secondhand ties, and 43 "ties other than wood." While Class I roads in the United States were installing slightly more crossties, the three leading roads in Canada were doing likewise and at about the same percentage rate. Canadian installations increased 45,812 in 1950 to a total of 7,062,677. This total included 815,688 new untreated ties and 6,246,989 new treated ties. Canadian roads did not install any secondhand ties or ties "other than wood."

These comparisons are based on the tabulation of crosstie renewal statistics compiled for the Committee on Ties of the A.R.E.A. by the Bureau of Railway Economics of the Association of American Railroads, from reports made to the Interstate Commerce Commission by Class I railroads in the United States and from figures furnished by the large Canadian railroads to the A.R.E.A.

In 1950 figures were furnished by 130 roads, of which 127 are in the United States and three in Canada. Some of the more significant statistics are reproduced in the table accompanying this article.

The increase in the total number of ties renewed during 1950, coupled with a decrease in the mileage of tracks maintained in the United States, raised the average number of new wood crossties renewed per mile to 92. Even so, it was the second lowest average of record, the all-time low (91) having been established in 1949. For roads in Canada, the comparable average decreased from 144 in 1949 to 142 in 1950.

Of the 130 roads reporting, 71 showed a decrease in average tie renewals; two roads installed ties at the same rate as in 1949; and the remainder stepped up their installation rates. The seven roads that made the greatest reduction in tie renewals per mile of maintained track were the Akron, Canton & Youngstown (150 to 56); the Utah (139 to 52); the Mississippi Central (168 to 103); the Western Pacific (208 to 144); the Texas & Northern (124 to 64); the Bangor & Aroostook (223 to 167); and the Pittsburg & Shawmut (106 to 52).

The first and last roads in this group illustrate vividly the warning that is pointed out in almost every report of the A.R.E.A. Committee on Ties, to wit, that caution must be used in making comparisons of tie-renewal records on individual roads because so many factors are involved, including the kind and volume of traffic, as well as general maintenance conditions and practices. (Tables appear on pages 56 and 57. Text continued on page 58)



# Statistics of Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1950

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1950	Number of wood crosstie renewals per mile of maintained track		Per cent of wood crosstie renewals to all ties in track		Average cost of new wood ties treated	Estimated total crossties in all maintained tracks	Cost of new wood crossties inserted per mile of maintained track	Cost of new wood crossties inserted per thousand equated gross ton-miles (cents)
			1950	5-year average	1950	5-year average				
NEW ENGLAND REGION:										
Bangor & Aroostook.....	831.48	139,075	167	188	5.8	6.6	\$3.26	2,392,135	\$355	14.77
Boston & Maine.....	2,769.65	178,517	64	57	2.2	1.9	3.34	8,170,468	172	4.05
Canadian Nat. Lines in New Eng.....	233.59	17,634	75	92	2.4	2.9	2.23	739,900	187	7.19
Canadian Pacific (lines in Me.).....	216.23	19,648	91	95	3.1	3.2	2.27	627,876	216	2.54
Canadian Pacific (lines in Vt.).....	125.16	13,008	104	76	3.5	2.5	2.05	376,959	156	4.26
Central Vermont.....	492.02	24,518	49	48	1.7	1.6	2.72	1,459,054	128	2.81
Maine Central.....	1,187.19	125,843	105	111	3.5	3.7	3.54	3,550,800	293	8.46
New York Connecting.....	25.90	2,356	91	93	2.9	2.9	4.14	81,641	354	2.90
New York, New Haven & Hartford.....	3,608.58	217,787	60	74	1.9	2.3	3.13	11,280,147	212	3.18
Rutland.....	485.23	16,933	32	45	1.0	1.4	3.23	1,508,900	122	3.79
Total.....	9,975.03	755,319	76	81	2.5	2.7	3.16	30,187,880	213	4.30
GREAT LAKES REGION:										
Ann Arbor.....	401.97	47,143	117	109	3.9	3.6	3.10	1,220,113	310	7.87
Cambria & Indiana.....	56.56	1,532	21	55	0.7	1.9	3.20	163,032	159	3.21
Delaware & Hudson.....	1,348.89	143,876	107	120	3.4	3.8	3.32	4,253,864	373	3.80
Delaware, Lackawanna & Western.....	2,157.06	170,490	79	87	2.6	3.0	3.39	6,652,009	266	3.78
Detroit & Mackinac.....	271.45	30,667	113	129	3.7	4.3	2.50	818,409	253	20.25
Detroit & Toledo Shore Line.....	150.05	18,017	119	70	3.9	2.3	3.37	452,514	218	6.80
Erie.....	4,692.32	346,097	74	71	2.5	2.4	3.28	13,836,908	215	3.02
Grand Trunk Western.....	1,854.18	194,471	105	115	3.3	3.6	2.78	5,877,710	299	4.97
Lehigh & Hudson River.....	110.70	7,076	55	80	2.0	3.0	3.36	297,560	263	2.79
Lehigh & New England.....	242.06	29,127	120	93	4.0	3.1	3.64	732,453	307	12.01
Lehigh Valley.....	2,519.65	188,552	75	88	2.5	3.0	3.39	7,548,809	281	4.77
Monongahela.....	248.91	10,045	40	65	1.4	2.2	3.17	729,138	190	2.74
Montour.....	72.54	6,212	86	66	3.0	2.3	3.86	208,922	218	9.03
New York Central.....	20,790.09	1,456,732	69	80	2.2	2.6	3.25	64,041,882	238	2.79
New York, Chi. & St. L. (Inc. W&LE).....	3,402.60	344,310	101	117	3.2	3.8	3.02	10,600,128	337	3.33
New York, Ontario & Western.....	674.30	35,429	53	11	1.8	0.4	1.43	1,931,396	15	3.18
New York, Susquehanna & Western.....	211.41	5,872	28	45	1.0	1.6	2.92	614,814	135	4.49
Pittsburgh & Lake Erie.....	810.65	76,535	95	103	3.1	3.4	3.36	2,452,557	300	5.69
Pittsburgh & Shawmut.....	116.65	12,541	52	142	1.8	5.0	3.29	331,602	437	6.10
Pittsburgh & West Virginia.....	181.58	19,757	103	87	3.4	2.9	3.70	552,943	294	5.54
Wabash.....	3,171.39	292,374	92	97	3.0	3.1	3.21	9,881,348	277	3.81
Total.....	43,475.99	3,436,855	78	86	2.6	2.9	3.20	133,198,111	255	3.33
CENTRAL EASTERN REGION:										
Akron, Canton & Youngstown.....	219.79	33,704	56	167	1.9	5.7	....	648,592	406	5.36
Baltimore & Ohio.....	10,397.41	1,085,552	104	95	3.7	3.4	2.78	29,599,887	244	3.30
Bessemer & Lake Erie.....	485.78	26,417	54	33	1.7	1.1	4.06	1,516,515	124	2.79
Central R. R. of New Jersey.....	902.60	65,613	73	88	2.6	3.1	3.24	2,537,631	244	4.27
Central R. R. of Pennsylvania.....	462.25	30,469	66	85	2.3	3.0	3.71	1,299,659	275	3.58
Chicago & Eastern Illinois.....	1,302.26	48,836	38	74	1.2	2.4	3.65	3,963,194	190	2.84
Chicago & Illinois Midland.....	165.04	13,142	80	101	2.6	3.4	3.67	501,757	331	3.33
Chicago, Ind'polis & Louisville.....	727.86	127,277	175	136	5.6	4.4	2.69	2,259,400	352	9.51
Detroit, Toledo & Ironton.....	599.28	53,701	90	80	3.1	2.8	2.73	1,734,389	199	5.92
Elgin, Joliet & Eastern.....	841.45	49,408	51	73	1.7	2.4	2.91	2,602,184	182	3.32
Illinois Terminal.....	629.42	57,051	90	85	2.9	2.8	2.47	1,954,530	195	12.11
Long Island.....	781.00	89,763	115	109	4.0	3.8	3.03	2,246,302	379	6.92
Missouri-Illinois.....	216.27	41,960	194	208	6.2	6.6	2.26	679,057	456	23.25
Pennsylvania.....	21,421.92	1,899,970	89	91	3.1	3.2	3.13	61,221,510	265	3.06
Penna.-Reading Seashore Lines.....	601.19	38,271	64	91	2.3	3.3	3.90	1,634,778	314	10.04
Reading Co.....	2,810.62	247,251	88	102	3.2	3.6	3.30	7,765,568	298	4.51
Staten Island Rapid Transit.....	93.19	5,544	59	74	2.3	2.9	3.49	238,560	220	11.62
Western Maryland.....	1,162.67	83,900	72	68	2.5	2.4	3.24	3,376,802	198	3.34
Total.....	43,820.00	3,997,829	91	92	3.2	3.2	3.03	125,780,315	259	3.45
POCAHONTAS REGION:										
Atlantic & Danville a.....	226.09	26,674	118	a	4.0	a	2.82	665,504	a	21.83
Chesapeake & Ohio.....	8,012.15	652,342	81	87	2.7	2.8	2.67	24,306,827	238	2.21
Norfolk & Western.....	4,330.73	599,141	137	119	4.4	3.8	2.71	13,425,263	310	3.59
Richmond, Fred. & Potomac.....	409.80	20,865	47	57	1.6	2.0	2.94	1,199,200	152	1.10
Virginian.....	944.17	107,657	114	107	3.7	3.5	2.64	2,900,908	253	3.65
Total.....	13,922.94	1,406,679	101	97	3.3	3.2	2.69	42,497,702	259	2.75
SOUTHERN REGION:										
Alabama Great Southern.....	527.06	77,492	147	192	4.8	6.3	3.20	1,603,613	564	5.50
Atlantic & St. Andrews Bay b.....	115.47	19,901	172	b	5.7	b	3.39	347,010	b	12.44
Atlanta & West Point.....	147.06	23,457	160	162	5.3	5.3	3.07	439,307	436	8.10
Atlantic Coast Line.....	7,267.62	718,467	99	198	3.2	6.5	2.66	22,166,241	501	5.12
Central of Georgia.....	2,315.34	305,175	132	141	4.6	4.8	2.23	6,696,175	318	6.60
Charleston & Western Carolina.....	427.40	89,000	208	183	7.2	6.3	2.65	1,236,747	489	25.18
Cin., New Orleans & Tex. Pac.....	772.10	124,227	161	134	5.4	4.6	3.19	2,287,426	409	4.06
Clinchfield.....	419.91	119,934	286	236	9.4	7.8	2.97	1,276,529	560	7.45
Columbus & Greenville.....	203.91	29,153	143	165	4.5	5.2	2.18	645,987	375	22.98
Florida East Coast.....	1,150.65	171,286	133	155	4.6	5.3	3.01	3,346,067	415	7.02
Georgia.....	440.13	63,636	145	129	4.8	4.2	2.70	1,337,094	324	9.06
Georgia & Florida.....	408.05	101,155	248	229	9.2	8.5	....	1,101,735	337	22.08
Georgia, Southern & Florida.....	466.59	98,655	211	206	6.7	6.6	2.76	1,468,110	426	10.99
Gulf, Mobile & Ohio.....	3,560.46	439,193	122	181	3.9	5.9	2.62	11,184,788	443	6.63
Illinois Central.....	9,815.67	1,418,140	144	180	4.7	5.9	....	29,919,900	444	5.72
Louisville & Nashville.....	6,753.50	675,288	100	119	3.5	4.1	2.59	19,331,948	296	3.53
Mississippi Central.....	174.00	20,397	103	137	3.2	4.3	2.38	552,638	303	11.98
Nashville, Chatt. & St. Louis.....	1,444.75	196,911	136	104	5.0	3.8	2.44	3,952,836	247	5.93
New Orleans & Northeastern.....	295.07	41,621	141	208	4.8	7.2	3.33	872,229	634	5.18
Norfolk Southern.....	774.09	165,989	210	228	7.2	7.8	2.70	2,270,608	467	20.80

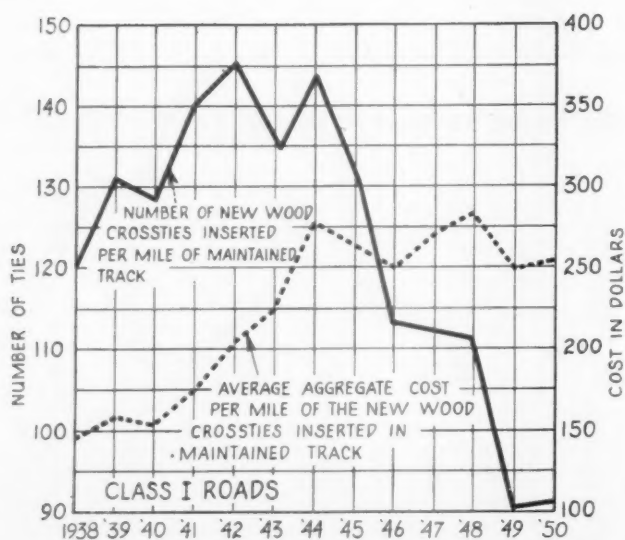
Footnote references appear on facing page.

# Statistics of Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1950 (Continued)

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1950	Number of wood crosstie renewals per mile of maintained track		Per cent crosstie of wood renewals to all ties in track		Average cost of new wood ties treated	Estimated total crossties in all maintained tracks	Cost of new wood crossties inserted per mile of maintained track	Cost of new wood crossties inserted per thousand sand equated gross ton-miles (cents)
			1950	5-year average	1950	5-year average				
SOUTHERN REGION (Continued)										
Seaboard Air Line.....	5,401.27	801,845	148	165	4.9	5.5	2.55	16,325,110	410	5.91
Southern Ry.....	8,461.57	937,860	111	117	3.6	3.8	3.06	26,236,395	346	5.50
Tennessee Central.....	342.31	46,627	136	140	4.5	4.6	2.68	1,036,545	275	15.02
Western Ry. of Alabama.....	187.82	30,342	162	146	5.4	4.8	3.06	562,029	391	9.10
Total.....	51,871.80	6,715,751	129	159	4.3	5.3	2.71	156,197,067	401	5.66
NORTHWESTERN REGION:										
Chicago & North Western.....	11,012.34	992,926	90	100	3.0	3.4	2.56	32,672,834	232	5.26
Chicago Great Western.....	1,843.29	400,469	217	178	7.3	6.0	3.43	5,495,089	526	15.71
Chicago, Milw., St. Paul & Pacific.....	13,500.55	310,140	23	89	0.7	2.9	2.78	41,683,513	202	1.18
Chicago, St. Paul, Minn. & Omaha.....	2,148.13	191,757	89	102	3.0	3.5	2.84	6,369,456	265	6.74
Duluth, Missabe & Iron Range.....	1,076.38	64,934	60	69	2.0	2.3	2.84	3,206,541	168	2.44
Duluth, South Shore & Atlantic.....	539.08	84,356	156	150	5.2	5.0	2.68	1,618,618	339	11.04
Duluth, Winnipeg & Pacific.....	206.20	35,775	173	241	5.9	8.2	2.53	607,549	512	9.16
Great Northern.....	10,269.85	1,000,189	96	111	3.1	3.6	2.96	31,689,074	265	5.21
Green Bay & Western.....	273.23	29,868	109	124	3.8	4.2	3.09	792,374	325	14.09
Lake Superior & Ishpeming.....	238.22	26,588	112	144	3.7	4.8	3.17	714,660	287	26.94
Minneapolis & St. Louis.....	1,542.14	292,443	190	167	6.3	5.6	2.75	4,645,707	388	17.92
Minneapolis, St. Paul & S. S. Marie.....	4,796.14	470,510	98	104	3.3	3.5	2.45	14,422,652	232	5.63
Northern Pacific.....	9,235.49	454,489	49	61	1.7	2.1	2.67	26,811,714	135	2.86
Spokane International.....	176.27	55,118	313	306	10.7	10.5	3.00	513,563	433	22.98
Spokane, Portland & Seattle.....	1,128.59	75,903	67	108	2.2	3.5	2.85	3,414,120	270	3.11
Total.....	57,985.90	4,485,465	77	100	2.6	3.3	2.79	174,657,464	233	4.50
CENTRAL WESTERN REGION:										
Atchison, Topeka & Santa Fe.....	19,387.56	1,155,334	60	77	1.9	2.5	2.81	61,904,478	174	2.17
Burlington-Rock Island c.....	179.37	9,212	51	115	1.6	3.7	2.40	561,428	277	5.62
Chicago, Burlington & Quincy.....	11,840.39	848,452	63	82	2.1	2.7	2.69	36,563,124	188	3.15
Chicago, Rock Island & Pacific.....	9,596.06	849,112	88	92	3.0	3.1	2.28	28,636,529	206	3.99
Colorado & Southern.....	813.30	50,047	59	82	2.0	2.7	2.86	2,439,110	205	3.61
Colorado & Wyoming.....	106.08	4,004	38	37	1.3	1.3	2.07	314,397	108	40.17
Denver & Rio Grande Western.....	3,376.24	257,526	60	46	1.9	1.5	3.29	10,520,500	137	3.84
Fort Worth & Denver City c.....	1,220.12	78,880	64	103	2.1	3.5	2.86	3,658,537	252	4.59
Northwestern Pacific.....	422.77	73,929	175	151	6.0	5.2	2.59	1,223,741	364	9.78
Sacramento Northern d.....	316.13	21,605	68	d	2.3	d	2.83	945,967	d	40.70
Southern Pacific Co.—Pac. Lines.....	12,090.34	873,845	72	79	2.4	2.5	2.66	35,807,884	194	1.84
Toledo, Peoria & Western e.....	278.28	25,554	92	e	2.9	e	2.20	883,492	e	6.38
Union Pacific.....	13,168.77	919,149	70	66	2.5	2.3	2.60	37,231,233	150	1.72
Utah.....	71.35	3,984	52	118	1.9	4.2	4.11	200,394	332	3.85
Western Pacific.....	1,534.35	221,809	144	206	4.9	6.9	2.76	4,566,853	488	4.86
Total.....	74,401.11	5,392,448	70	80	2.3	2.7	2.66	225,457,667	188	2.44
SOUTHWESTERN REGION:										
Beaumont, Sour Lake & Western...	109.37	16,455	150	181	5.0	5.8	2.65	328,100	455	2.77
International-Great Northern.....	1,347.66	239,970	178	144	5.6	4.7	2.47	4,261,400	347	7.00
Kansas City Southern.....	1,286.47	97,230	76	65	2.4	2.1	2.54	4,072,071	153	2.43
Kansas, Oklahoma & Gulf.....	352.55	33,244	94	79	3.2	2.7	2.60	1,046,698	197	5.79
Louisiana & Arkansas.....	884.13	105,793	120	73	3.7	2.3	2.42	2,878,413	164	5.72
Midland Valley.....	354.23	30,067	85	73	2.9	2.5	2.60	1,049,705	173	21.50
Missouri-Kansas-Texas Lines.....	3,912.84	376,162	96	94	3.1	3.0	2.68	12,322,600	232	5.29
Missouri Pacific.....	8,841.37	1,235,953	140	135	4.5	4.4	2.50	27,272,251	315	5.39
New Orleans, Texas & Mexico.....	227.67	42,691	188	153	6.1	5.0	2.64	696,400	384	7.17
Oklahoma City-Ada-Atoka.....	136.81	25,878	189	204	6.6	7.1	2.63	394,350	478	67.85
St. Louis, Brownsville & Mexico.....	777.47	87,652	113	130	3.7	4.3	2.41	2,351,800	307	6.70
St. Louis-San Francisco.....	5,822.46	738,218	127	123	4.0	3.9	2.49	18,333,603	273	6.37
St. Louis, San Fran. & Texas.....	151.66	16,905	111	119	3.5	3.8	2.51	484,597	265	5.60
St. Louis Southwestern Lines.....	1,838.30	251,121	134	157	4.3	5.0	2.53	5,737,066	377	4.32
San Antonio, Uvalde & Gulf.....	355.10	39,659	112	118	3.9	4.1	2.47	1,024,000	278	12.61
Texas & New Orleans.....	5,577.35	627,521	110	112	4.0	4.0	2.44	15,383,414	255	4.46
Texas & Northern f.....	11.27	726	64	f	1.6	f	1.75	44,360	f	3.73
Texas & Pacific.....	2,253.80	313,869	139	162	4.8	5.6	2.34	6,590,150	369	4.04
Texas Mexican.....	234.17	23,399	100	100	3.2	3.2	2.94	741,851	241	25.94
Total.....	34,474.68	4,302,513	124	122	4.1	4.0	2.50	105,012,829	285	5.23
Grand Totals—United States.....	329,927.45	30,492,853	92	104	3.0	3.4	2.79	992,989,035	262	3.75
CANADIAN ROADS:										
Canadian National.....	27,791.00	4,027,512	145	144	5.0	4.9	2.27	81,131,445	270	c
Canadian Pacific.....	21,218.60	2,846,636	134	143	4.7	5.0	2.36	61,073,589	290	6.96
Ontario Northland.....	693.60	188,529	272	236	9.6	8.2	3.08	1,970,000	410	25.64

† These are storekeepers' average costs for the ties charged out and used. They are not actual costs or the prices paid for ties purchased during the period.  
a The Atlantic & Danville became a Class I road August 1, 1949; figures shown for 1950 are for the last five months of year.  
b The Atlanta & St. Andrews Bay became a Class I road January 1, 1947; formerly a Class II road.  
c Data shown for the Burlington-Rock Island for 1950 are for the five months ended May 1950. Subsequent months are included in the Fort Worth & Denver City.  
d The Sacramento Northern became a Class I road January 1, 1948; formerly a Class I electric road.  
e The Toledo, Peoria & Western did not report its tie renewals in 1945 and 1946.  
f The Texas & Northern became a Class I road November 30, 1948.





The average number of new crossties renewed per mile of maintained track rose in 1950, for the first time since 1944, to 92. However, this figure was the second lowest of record. With the average "charge-out" price per tie increasing one cent, the average cost of the ties inserted per mile of maintained track also rose slightly

(Continued from page 55)

For instance, according to these records, the A. C. & Y., which in 1950 made the greatest reduction in tie renewals per mile of any Class I road, used nothing but untreated ties in three of the last 10 years, including both 1949 and 1950, and installed only 147 treated ties in 1948. However, in two of those years—1940 and 1941—the installation of treated ties was quite large. Of the ties installed in all other years untreated ties were

### Action Is Needed Now

What can be done to improve l.c.l. service? Many things. This is an old subject which has been discussed for many years. There is nothing new about the problem, but there have been many "new" ideas as to how it can be solved, as is illustrated by the following:

1936—Federal Coordinator Joseph B. Eastman recommends the establishment of two railroad-owned, competing, national l.c.l. agencies to take over all rail l.c.l., express and forwarder traffic.

1938—Railroad superintendents recommend the establishment of more package cars and fast merchandise schedules. 1940—Senate Interstate Commerce subcommittee hearings bring forth a multitude of proposals and counter-proposals for recapturing rail l.c.l. traffic, including a suggestion to require compulsory poolings.

1942—The Office of Defense Transportation considers—but rejects—compulsory rail and truck coordination. (Is it conceivable that such a measure might be needed in the future?)

1945—National Industrial Traffic League "advocates the establishment of an l.c.l. department within the Association of American Railroads to coordinate the efforts of the carriers in the proper handling of l.c.l. freight."

1948—National Association of Shippers Advisory Boards urges the "re-establishment of prewar standards of l.c.l. service as measured by through package car service."

1950—Shippers Advisory Boards approve railroads' 18-point program for improvement of l.c.l. service.

1950—Trans-Missouri-Kansas Shippers Advisory Board suggests establishment of a national l.c.l. agency patterned after the Railway Express Agency.

—H. T. Reed

General Traffic Manager  
Line Material Company

preponderant. Thus, without the benefit of more specific information, questionable conclusions might easily be reached.

In the case of the Pittsburg & Shawmut, which made the greatest reduction in tie renewals per mile in 1949 (223 to 106), and was seventh in 1950 (106 to 52), the results were similar but the practices that produced them appeared, on the surface at least, to be different. This road stopped the use of untreated ties in 1941 and for several years installed treated ties as replacements at a very high rate per mile. Very heavy replacements in 1945, 1946 and 1947 put this road's general tie condition in such a good state that reduced rates of installation were a matter of course, resulting in the renewal of 52 ties per mile in 1950, the tenth lowest average among all Class I roads. Other roads with low averages in 1950 include the Cambria & Indiana (21); the Chicago, Milwaukee, St. Paul & Pacific (23); the New York, Susquehanna & Western (28); the Rutland (32); and the Chicago & Eastern Illinois (38).

The railroad with the lowest annual average tie renewals per mile for the five-year period ending with 1950 is the Bessemer & Lake Erie (33). Other low averages in this category were reached on the Colorado & Wyoming (37); the Rutland (45); the New York, Susquehanna & Western (45); and the Denver & Rio Grande Western (46).

The 1950 statistics show that, of the eight regions by which the railroads of the United States are grouped, three had a reduction in ties renewed per mile of track maintained as compared with the year before. These were the Southern region (136 to 129), the North-western region (90 to 77), and the Central Western region (74 to 70). Increases were registered by the New England region (71 to 76), the Great Lakes region (76 to 78), the Central Eastern region (73 to 91), the Pocahontas region (93 to 101), and the Southwestern region (108 to 124).

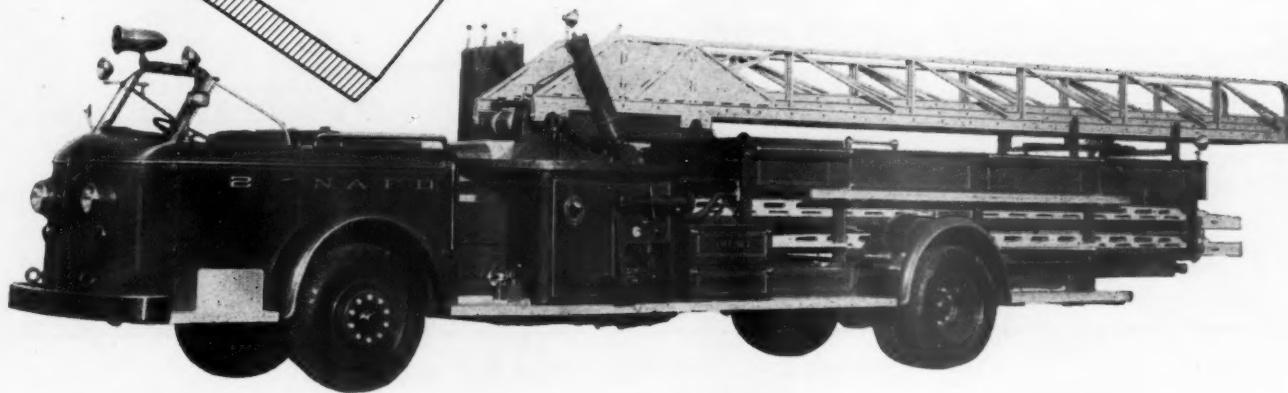
During 1950, 79 roads in the United States reported using treated ties exclusively in maintenance. The number of roads in this category in the previous 10 years was 75 in 1949, 72 in 1948, 66 in 1947, 63 in 1946, 56 in 1945, 54 in 1944, 45 in 1943, 49 in both 1942 and 1941, and 47 in 1940. Only two roads reported not using any treated ties at all. Of the roads using both treated and untreated ties, only five (one of these being in Canada) reported using more untreated than treated ties.

The ratio that treated wood ties bear to the total ties renewed in the United States rose to a new high of 96.4 per cent in 1950, as compared to 95.3 per cent in 1949, 95.1 per cent in 1948, 94.7 per cent in 1947, 94.3 per cent in 1946, 94.0 per cent in 1945, 93.4 per cent in 1944, 91 per cent in 1943, and 89 per cent in 1942. For Canada, the comparable ratio rose from 85.9 in 1949 to 88.4 in 1950.

A comparison of the average storekeepers' prices of individual crossties in 1950 with the prices in 1949 shows that the figure for new, untreated ties decreased from \$1.64 to \$1.50. At the same time the comparable figure for new, treated ties remained the same at \$2.79, while that for all new wood ties increased from \$2.74 to \$2.75.\*

As shown in the accompanying table, these statistics cover a total of 329,927.45 miles of maintained track in the United States and 49,703.20 miles in Canada. These mileages compare with 330,612.42 miles in the United States and 48,684.60 miles in Canada in 1949.

\* The increase—which was actually slightly less than one full cent—resulted from use of a larger number of treated ties, and a substantially smaller number of untreated ties, in 1950, as compared with 1949.



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# Five-Months' Purchases Total \$1,544,089,000

Total purchases by domestic railroads of all types of materials during the first five months of 1951 totaled \$1,544,089,000, compared with \$995,952,000 in the first five months of the preceding year. Commitments for purchase of rolling stock during this year's first five months amounted to \$565,693,000, compared with \$338,955,000 in the comparable period last year. Purchases in all categories except rail showed an increase over purchases in the first five months of 1950.

Purchases in May alone totaled \$242,078,000, including \$42,990,000 in equipment commitments, which called for purchase of 4,919 freight-train cars and 81 diesel-electric locomotive units.

## 1951 RAILWAY PURCHASES\*

	May (000)	Five Months Totals 1951 (000)	Five Months Totals 1950 (000)
Equipment**	\$42,990	\$565,693	\$333,855
Rail	8,971	40,067	40,960
Crossties	8,797	35,049	22,307
Other Material	132,115	630,032	354,172
Total from Manufacturers	\$192,873	\$1,270,832	\$756,294
Fuel	49,205	273,257	239,658
Grand Total	\$242,078	\$1,544,089	\$995,952

\*Subject to revision

\*\*Amount placed on order

## MAY\* PURCHASES OF MANUFACTURED GOODS (Excl. Equip. & Fuel)

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$ 81,481	+ 84	Jan. '50	\$ 73,861	+103	1945	\$403,090	+ 75
1946	81,891	+ 83	Apr. '50	86,019	+ 74	1946	380,213	+ 85
1947	105,379	+ 42	Jan. '51	132,739	+ 13	1947	503,334	+ 40
1948	105,076	+ 43	Feb. '51	123,405	+ 21	1948	536,008	+ 32
1949	102,473	+ 46	Mar. '51	147,084	+ 2	1949	539,412	+ 31
1950	98,328	+ 52	Apr. '51	152,028	- 1	1950	417,439	+ 69
1951	149,883		May '51	149,883		1951	705,139	

## MAY\* PURCHASES OF RAIL

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$ 5,184	+ 72	Jan. '50	\$ 8,846	+ 1	1945	\$ 29,032	+ 38
1946	4,963	+ 81	Apr. '50	7,831	+ 15	1946	20,356	+ 97
1947	6,972	+ 29	Jan. '51	7,746	+ 16	1947	35,271	+ 14
1948	6,841	+ 31	Feb. '51	7,297	+ 23	1948	37,095	+ 8
1949	9,868	- 9	Mar. '51	7,898	+ 14	1949	47,179	- 15
1950	10,106	- 11	Apr. '51	8,155	+ 10	1950	40,960	- 2
1951	8,971		May '51	8,971		1951	40,067	

## MAY\* PURCHASES OF CROSSTIES

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$ 6,484	+ 36	Jan. '50	\$ 3,618	+143	1945	\$ 28,731	+ 22
1946	7,915	+ 11	Apr. '50	5,003	+ 75	1946	35,566	- 1
1947	8,441	+ 4	Jan. '51	6,512	+ 35	1947	40,107	- 13
1948	6,137	+ 43	Feb. '51	5,403	+ 63	1948	28,211	+ 24
1949	7,669	+ 15	Mar. '51	7,237	+ 22	1949	37,597	- 7
1950	5,197	+ 69	Apr. '51	7,100	+ 24	1950	22,307	+ 57
1951	8,797		May '51	8,797		1951	35,049	

## MAY\* PURCHASES OF OTHER MATERIAL

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$ 69,813	+ 89	Jan. '50	\$ 61,397	+115	1945	\$345,327	+ 82
1946	69,008	+ 91	Apr. '51	73,185	+ 81	1946	324,291	+ 94
1947	89,966	+ 47	Jan. '51	118,481	+ 12	1947	427,956	+ 47
1948	92,098	+ 43	Feb. '51	110,705	+ 19	1948	470,702	+ 34
1949	84,936	+ 56	Mar. '51	131,949	-	1949	454,636	+ 39
1950	83,025	+ 59	Apr. '51	136,773	- 3	1950	354,172	+ 78
1951	132,115		May '51	132,115		1951	630,023	

\*Subject to revision.

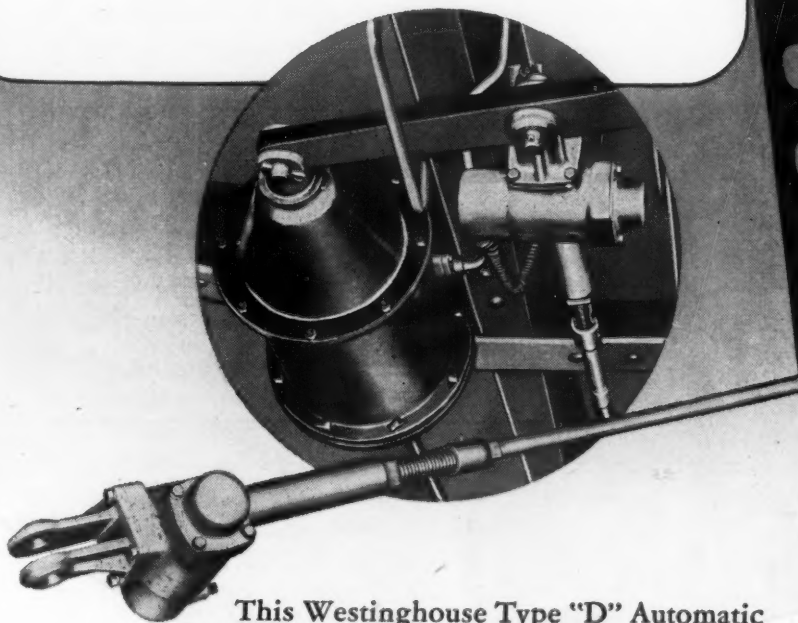
(Continued on page 62)

# WESTINGHOUSE

## Type "D"

### PNEUMATIC

### Automatic Slack Adjuster

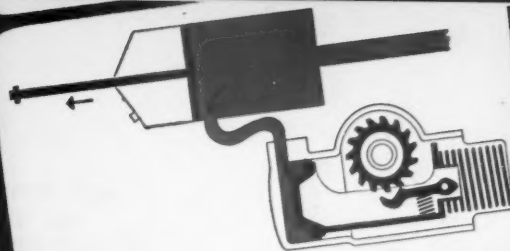


This Westinghouse Type "D" Automatic Pneumatic Slack Adjuster eliminates the involved, time-consuming manual adjustment of rigging on cars in classification yards. Simple design (only half a dozen rugged parts) assures long, trouble-free service with minimum attention.

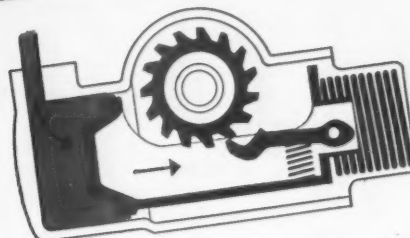


Ask for Descriptive Leaflet No. 2468.

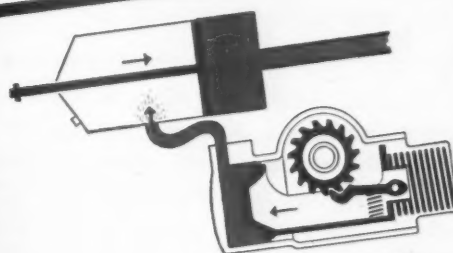
**Westinghouse Air Brake Co.**  
AIR BRAKE DIVISION  
WILMERDING, PA.



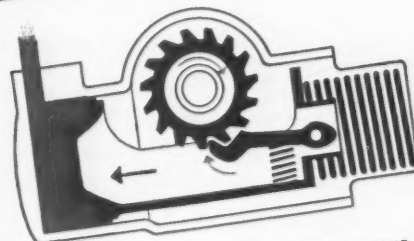
Excessive piston travel in air brake cylinder uncovers port, admits air to slack-adjuster cylinder.



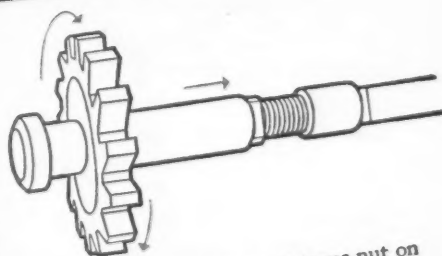
Air pressure moves slack adjuster piston back, compressing piston spring.



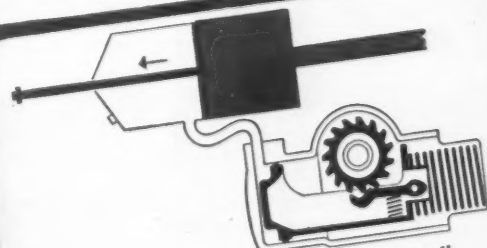
When brake is released, air in slack adjuster piston is vented. Piston spring returns slack adjuster piston.



Pawl on slack adjuster piston engages ratchet nut . . . advances it one notch.



Rotation of ratchet nut turns nut on tie rod, shortening the connection.



Process is repeated with each brake application until proper brake piston travel is established. No further action till brake-shoe wear calls for further adjustment.



# MAY\* PURCHASES OF FUEL

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$ 48,638	+ 1	Jan. '50	\$ 47,063	+ 5	1945	\$233,952	+ 17
1946	30,280	+ 63	Apr. '50	51,687	- 5	1946	214,151	+ 28
1947	52,469	- 6	Jan. '51	62,465	- 21	1947	278,726	- 2
1948	72,968	- 33	Feb. '51	51,677	- 5	1948	343,820	- 21
1949	52,615	- 6	Mar. '51	57,171	- 14	1949	283,828	- 4
1950	48,648	+ 1	Apr. '51	52,739	- 7	1950	239,658	+ 14
1951	49,205		May '51	49,205		1951	273,257	

# MAY\* TOTAL PURCHASES (Excl. Equip.)

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)			Five Months Totals '51 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1945	\$130,119	+ 53	Jan. '50	\$120,924	+ 65	1945	\$637,042	+ 54
1946	112,171	+ 77	Apr. '50	137,706	+ 45	1946	594,364	+ 65
1947	157,848	+ 26	Jan. '51	195,204	+ 2	1947	782,060	+ 25
1948	178,044	+ 12	Feb. '51	175,082	+ 14	1948	879,828	+ 11
1949	155,088	+ 28	Mar. '51	204,255	- 3	1949	823,240	+ 19
1950	146,976	+ 35	Apr. '51	204,767	- 3	1950	657,097	+ 49
1951	199,088		May '51	199,088		1951	978,396	

# MAY\* INVENTORIES OF RAIL

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$26,057	+ 63	Jan. 1, '50	\$31,926	+ 33
1946	24,119	+ 76	Apr. 1, '50	41,482	+ 2
1947	26,875	+ 58	Jan. 1, '51	38,278	+ 11
1948	31,911	+ 33	Feb. 1, '51	40,702	+ 4
1949	41,264	+ 3	Mar. 1, '51	43,757	- 3
1950	38,941	+ 9	Apr. 1, '51	41,880	+ 1
1951	42,416		May 1, '51	42,416	

# MAY\* INVENTORIES OF FUEL

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$51,236	+ 23	Jan. 1, '50	\$48,928	+ 29
1946	42,918	+ 47	Apr. 1, '50	42,492	+ 49
1947	55,973	+ 13	Jan. 1, '51	58,612	+ 8
1948	62,094	+ 2	Feb. 1, '51	59,407	+ 6
1949	81,686	- 23	Mar. 1, '51	63,351	-
1950	43,695	+ 45	Apr. 1, '51	62,299	+ 2
1951	63,267		May 1, '51	63,267	

# MAY\* INVENTORIES OF CROSSTIES

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$74,792	+ 23	Jan. 1, '50	\$101,393	- 9
1946	77,413	+ 19	Apr. 1, '50	106,269	- 13
1947	89,906	+ 3	Jan. 1, '51	83,804	+ 10
1948	92,711	-	Feb. 1, '51	88,036	+ 5
1949	101,641	- 9	Mar. 1, '51	91,400	+ 1
1950	99,118	- 7	Apr. 1, '51	87,624	+ 5
1951	92,275		May 1, '51	92,275	

# MAY\* TOTAL INVENTORIES†

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$610,825	+ 38	Jan. 1, '50	\$725,521	+ 16
1946	608,270	+ 38	Apr. 1, '50	725,896	+ 16
1947	720,591	+ 17	Jan. 1, '51	725,819	+ 16
1948	806,905	+ 4	Feb. 1, '51	757,437	+ 11
1949	885,399	- 5	Mar. 1, '51	785,987	+ 7
1950	716,868	+ 17	Apr. 1, '51	814,152	+ 3
1951	840,156		May 1, '51	840,156	

# MAY\* INVENTORIES OF OTHER MATERIAL

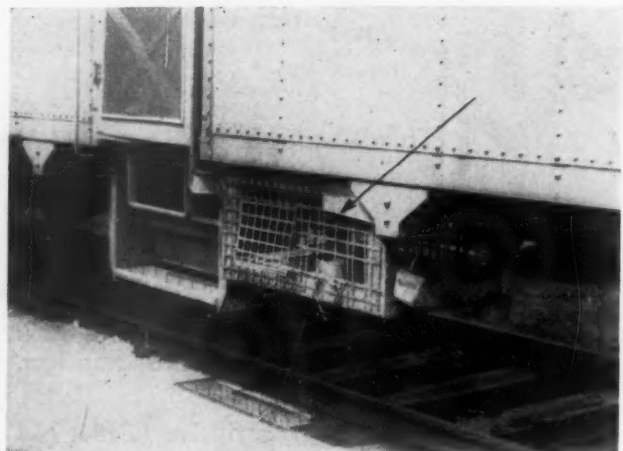
May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$448,326	+ 39	Jan. 1, '50	\$528,400	+ 18
1946	452,861	+ 38	Apr. 1, '50	521,506	+ 20
1947	535,071	+ 17	Jan. 1, '51	526,865	+ 18
1948	603,972	+ 3	Feb. 1, '51	549,054	+ 14
1949	642,872	- 3	Mar. 1, '51	567,592	+ 10
1950	520,845	+ 20	Apr. 1, '51	603,574	+ 3
1951	624,097		May 1, '51	624,097	

# MAY\* INVENTORIES OF SCRAP

May '51 Compared to Other Mays (000)			May '51 Compared to Other Months '50 and '51 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
May 1, 1945	\$10,414	+ .74	Jan. 1, '50	\$14,874	+ 22
1946	10,959	+ .65	Apr. 1, '50	14,147	+ 28
1947	12,766	+ 42	Jan. 1, '51	18,260	- 1
1948	16,217	+ 12	Feb. 1, '51	20,238	- 11
1949	17,936	+ 1	Mar. 1, '51	19,887	- 9
1950	14,269	+ 27	Apr. 1, '51	18,775	- 4
1951	18,101		May 1, '51	18,101	

\*Subject to revision.

†All total inventory figures taken from I.C.C. statement M-125 for the month indicated.



**NO WASTE SPACE ON THIS B. & B. GANG BUNK CAR**—The cook has placed a cage for raising chickens under the car. This not only provides fresh fowl for the gang but also an automatic alarm clock

# "Fissures" in Crossties Are Expensive Too

*Although not as dangerous as transverse fissures in rails, splits and checks are the most prevalent basic causes of premature failure in crossties. But a new process now provides strict seasoning control and better preservative treatment that add years to service life.*

**I**T WAS in 1911 that transverse fissures first were recognized as a serious cause of rail failures. In the years that followed, thousands of defective rails were removed from track before an observant metallurgist, poring over service reports, noticed that this most dangerous of all rail defects occurred much more frequently in rail rolled in winter. How, he asked himself, did summer-rolled rail differ from the winter product? Thus began a long series of investigations and tests that eventually culminated in perfecting a controlled cooling process that has virtually eliminated transverse fissures, lengthened the service life of rails and saved the railways thousands of dollars.

Like transverse fissures in rails, splitting and checking are among the most serious causes of decay, premature failure and untimely replacement of ties. As in the early days of transverse fissures, many people still accept checking and splitting of crossties as "natural" and unavoidable.

Checks and splits usually start during the long air-seasoning period before preservative treatment. After treatment and installation in track, these splits usually progress, and sooner or later rupture the treated envelope and expose untreated wood. Spores of wood-destroying fungi and decay thus get an unhindered foothold; too soon the tie must be replaced.

But just as controlled cooling has eliminated transverse fissures so has a modern technological process known as Vapor-Drying\* largely stopped checking and splitting because it eliminates the air-seasoning period. Green crossties are shipped from sawmills directly to treating plants where

their moisture content is reduced and preservatives added in hours instead of long months.

Everyone who inspects Vapor-Dried ties newly installed in track remarks on their comparative freedom from checks and splits, usually so evident even in new hardwood ties. Then after varying periods of service (one controlled test is now in its eighth year), the difference between air-seasoned and Vapor-Dried ties is even more remarkable. Small checks in Vapor-Dried ties do not progress in length and depth. Decay gets little chance to get in and start its dirty work. Naturally such ties should last longer.

There is plenty of evidence to indicate that a railroad which goes to Vapor-Dried crossties can eventually save \$100 a mile yearly — and up — in maintenance costs. And there are more benefits, such as being able to use plentiful and less expensive woods such as gum which makes long-lasting and dependable crossties when Vapor-Dried.

Norfolk & Western, whose Vapor-Drying plant is now in its second year of operation, has tested and thoroughly proved the many advantages of the new process. Other roads including the Southern, Atlantic Coast Line, Charleston & Western Carolina, Clinchfield, and Piedmont & Northern also use Vapor-Dried ties. Still other roads are investigating; preliminary reports are favorable.

Why not let us tell you about the outstanding advantages and economies of Vapor-Drying? You and your engineers will find our story interesting and profitable listening. Write Vapor-Drying Division, Taylor-Colquitt Co., Spartanburg, S. C.

This is the fourth in a series of discussions on the economic aspects of Vapor-Drying. Another will appear soon.

(Advertisement)



\*Process patented



# UNIT EXCHANGE MEANS "USE OUR SPARES"

**Y**OU can reduce your railroad's investment in Diesel locomotive parts inventory by using Electro-Motive's "Unit Exchange" service.

Factory-rebuilt assemblies—traction motors, generators, blowers and other components—are available for shipment on schedule from Electro-Motive's six Factory Branches. All have been expertly rebuilt and are fully guaranteed.

#### *Low Flat-Rate Charge*

You pay no premium for "Unit Exchange" service. When we rebuild your unit, the cost is the same whether we send back the same unit (Rebuild and

Return) or furnish immediately a unit from our pool (Unit Exchange). You pay only the cost of bringing the complete assembly to top standard condition—at Electro-Motive's low flat-rate charge.

#### *"New Part" Guarantee*

Every assembly rebuilt by Electro-Motive carries the same guarantee as a brand-new part—100,000 miles or one year of service. And this guarantee dates from time of application on locomotive, *not* the date of shipment.

Write us or ask your Electro-Motive representative for full details.

### *Let's keep 'em turning!*

*Through "Unit Exchange," Electro-Motive actually carries the spares for you. There is no extra charge for this service, but we urge your cooperation in returning exchange units promptly. This will keep "in transit" float to a minimum and expedite shipment of "rebuilt units." It will help assure getting rebuilt units when you need them.*

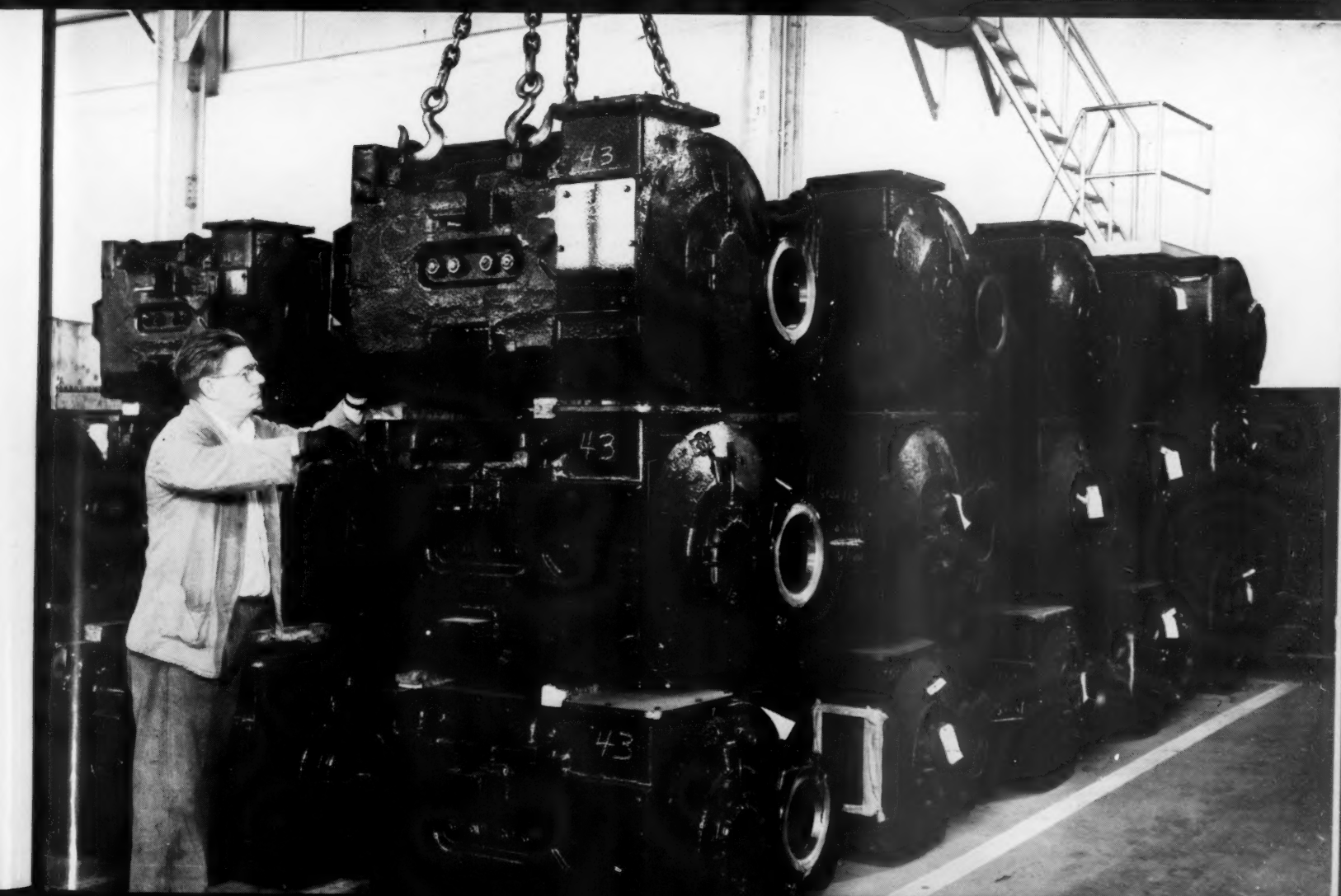
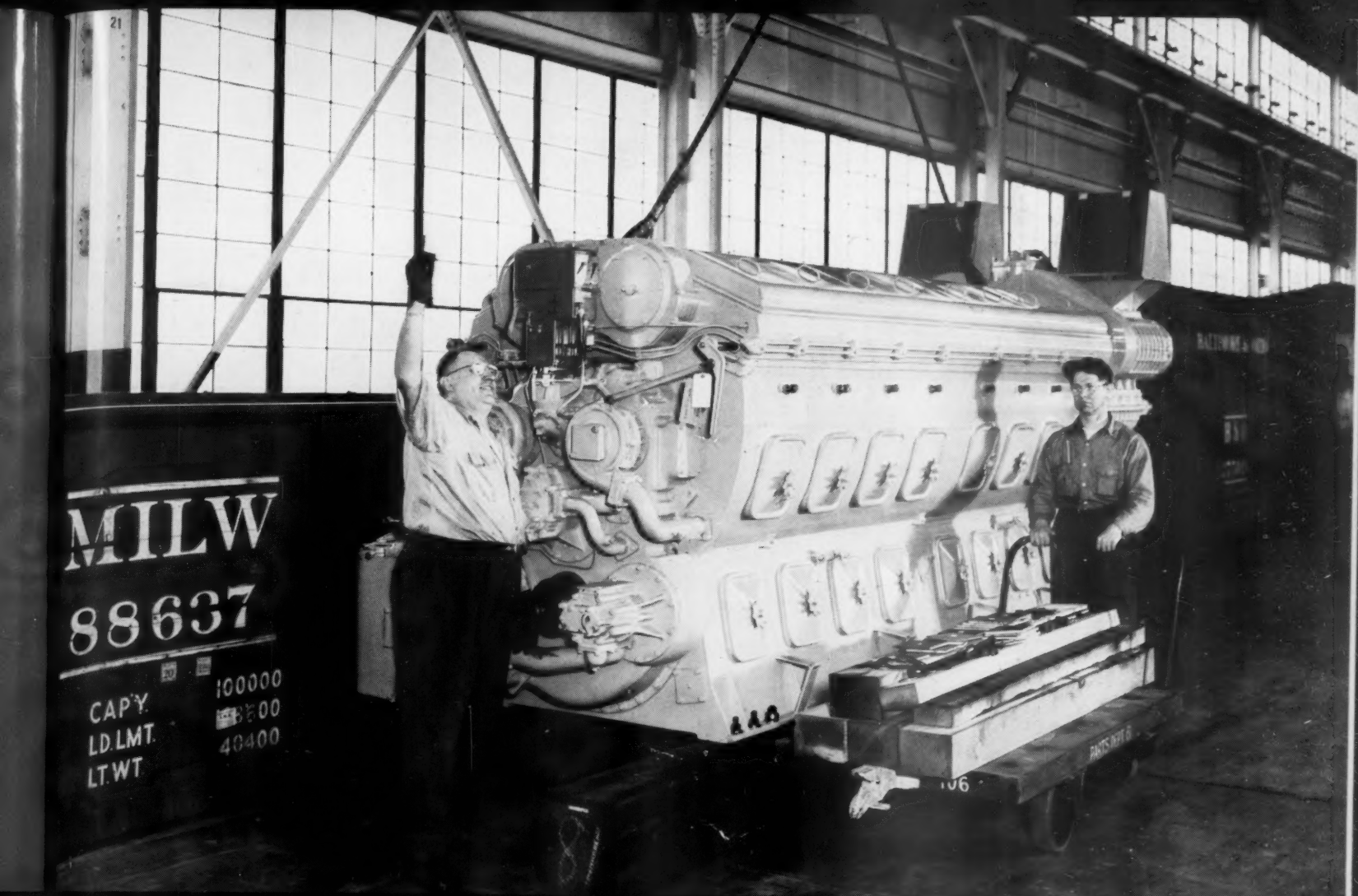
## ELECTRO-MOTIVE DIVISION

GENERAL MOTORS • LA GRANGE, ILLINOIS

*Home of the Diesel Locomotive*

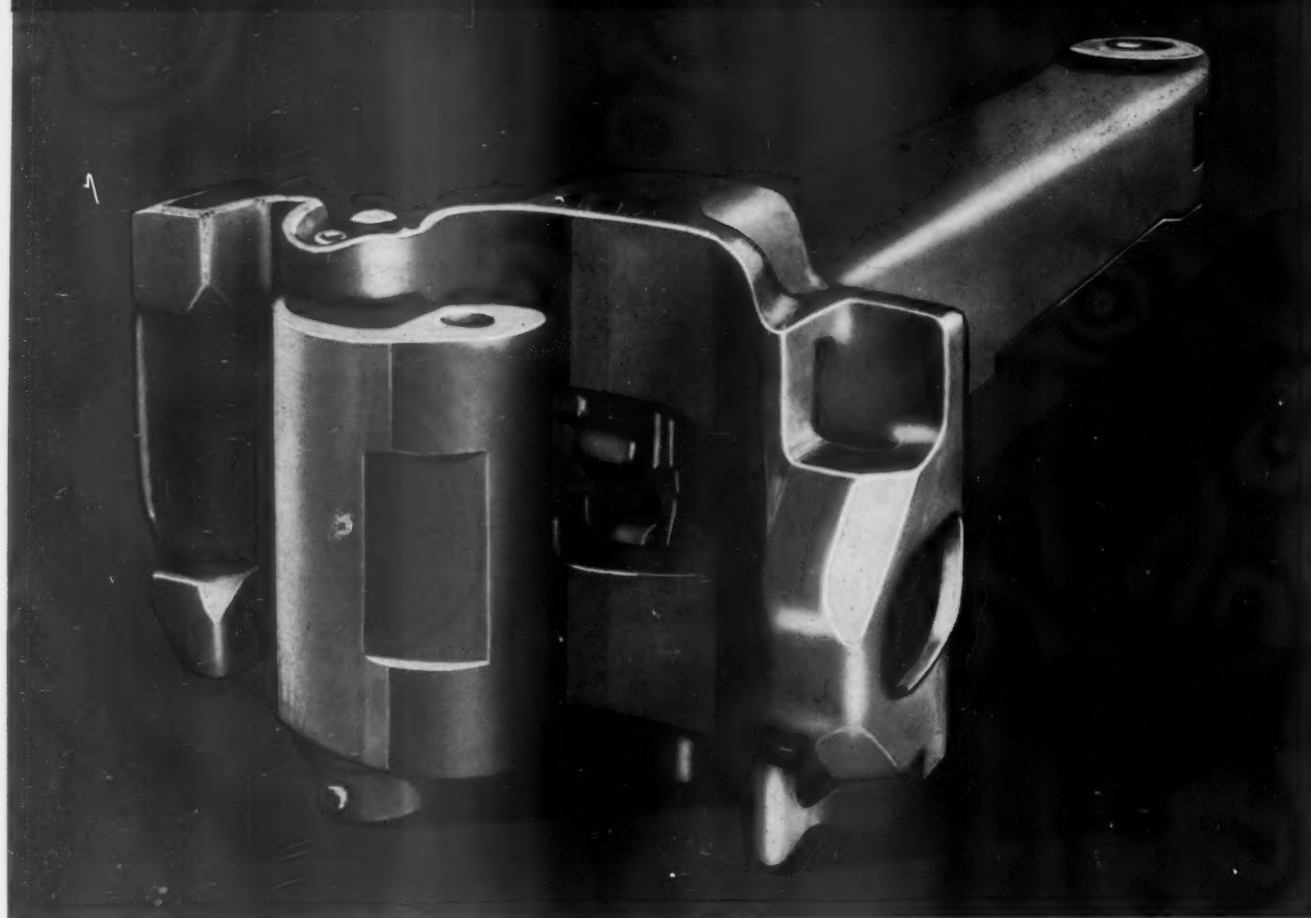
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# **NATIONAL**

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**SHARON 10 COUPLERS**  
**WILLISON COUPLERS**

**also**  
**STANDARD**  
**E COUPLERS**  
*and coupler repair parts*

**NATIONAL MALLEABLE and STEEL CASTINGS COMPANY**

**NATIONAL**



A-4033



## GENERAL NEWS

### B. & A. Would Sell Back Bay Yards for \$8,800,000

The Boston & Albany has announced its willingness to sell its 28-acre Back Bay yards in Boston for \$8,800,000. John F. Nash, general manager, said sale would include air rights to build structures over the road's four-track main line. Disposal of the property has been the subject of recent talks between representatives of the railroad and various civic groups.

### Knudson Defends D.T.A.'s Use of Advisory Groups

Defense Transport Administrator James K. Knudson appeared before the House monopoly subcommittee July 26 to correct "certain erroneous impressions" on use of business advisory committees by D.T.A.

Specifically, Mr. Knudson was answering a statement made June 11 before the subcommittee by H. G. Morison, chief of the Anti-Trust Division of the Department of Justice. Mr. Morison discussed the use of industry advisory committees in the mobilization agencies, and particular reference was made to the railroad "task force" in D.T.A. (*Railway Age*, June 18, page 58.)

Mr. Morison said this "task force" was headed by Caleb R. Megee, vice-chairman of the Car Service Division of the Association of American Railroads, and its secretary was William F. Betts, also of the C.S.D. He indicated this use of "association men" on such committees was a violation of certain provisions of the Defense Production Act.

Mr. Knudson acknowledged that D.T.A. "proposes" to use this railroad "task force," along with similar

### Railroad Views in Wage Case Outlined to N.M.B.

In a letter to the National Mediation Board on August 9 the railroads set out in detail their position on settling the pending wage-rules dispute with the Brotherhood of Locomotive Firemen & Enginemen, the Brotherhood of Locomotive Engineers and the Order of Railway Conductors.

The roads agreed to arbitrate seven rules involved in the dispute, three of which concern only the O.R.C. The carriers agreed to accept "any referee or arbitrator" named by President Truman.

As to wages and other matters the carrier offer conforms to the pattern set by the May 25 agreement with the Brotherhood of Railroad Trainmen. That agreement was "based on" the December 21, 1950, memorandum of agreement signed at the White House.

The August 9 letter to the mediation board was in response to union proposals to arbitrate "the controversy." The carriers said the brotherhoods refused to make clear "the intent and meaning" of their arbitration proposal, and called it "an obvious attempt to see how much more they can get."

groups from other fields of transportation and storage. But he said the membership of no group has been completed, and "none of the task groups has functioned."

The D.T.A. administrator then explained to the subcommittee the origin of the task groups. They date from 1948, when they were formed under the general chairmanship of Col. J. Monroe Johnson, former director of the Office of Defense Transportation. They were at that time a part of the National Security Resources Board, and their role was to draw up a blueprint for mobilization of the nation's transportation system in the event of war.

In the beginning, the railroad "task force" was headed by C. H. Buford, president of the Chicago, Milwaukee, St. Paul & Pacific. Later, when he resigned, he was succeeded by Mr. Megee, who had been secretary of the group.

"These task groups did a magnificent job," Mr. Knudson told the subcommittee. He said the reports they prepared had been of great help to him, and having this material "made it possible for me to operate D.T.A. with a much smaller force than I otherwise would have had to have."

Mr. Knudson went on to say that it was his wish that D.T.A. have the advice and counsel of these task groups. After conferences with N.S.R.B. officials, plans were made to transfer the groups to D.T.A.

When full-scale mobilization did not develop however, these task groups were never used, Mr. Knudson

continued. He said his transport agency was able to do its job through the "excellent cooperation" of carriers and shippers, and added that "voluntary cooperation" made it unnecessary to resort to "government edict and control."

"There was no thought, of course, of trying to evade or circumvent any provision in the Defense Production Act or any other act of regulation," Mr. Knudson said. He denied that D.T.A. "ignored the Department of Justice" in setting up advisory groups.

He cited the Shippers Advisory Committee as an example. He said he received an "informal expression" from the department before the committee was appointed, and that D.T.A. General Counsel Frank A. Silver later submitted a memorandum to the department "for information and consideration." He noted the department had not replied to this memo, although it was sent to them on February 12.

E. Earnest Goldstein, the subcommittee's counsel, questioned Mr. Knudson about the work of Mr. Megee and Mr. Betts on the N.S.R.B. "task force." Mr. Knudson replied that he had found both men to be "good public servants," adding that they distinguished themselves in O.D.T. days and rendered "yeoman service" on the task force group.

## SUPPLY TRADE

The General Railway Signal Company has announced the retirement of **Frank W. Moffett**, vice-president and director, and the appointments of **George O. Hagenbach** as systems engineer, **John E. Freehafer** as assistant to the chief



Frank W. Moffett

engineer, and **Stuart Mason Phelps** as mechanical engineer.

Mr. Moffett, who was born on June 30, 1881, in Townsend, Del., began his business career in 1899, with the Hall Signal Company. In 1902 he joined the

### Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended August 4 were announced by the Association of American Railroads on August 9 as follows:

	Surplus	Shortage
Plain Box	3,874	7,401
Auto Box	88	68
<b>Total Box</b>	<b>3,962</b>	<b>7,469</b>
Gondola	0	4,898
Hopper	0	4,552
Covered Hopper	0	82
Stock	1,188	35
Flat	7	915
Refrigerator	786	0
Other	213	132
<b>Total</b>	<b>6,156</b>	<b>18,083</b>

Chicago & Alton (now Gulf, Mobile & Ohio) and worked as assistant foreman, foreman, and signal supervisor, successively. In 1904 he joined the Taylor Signal Company (now General Railway Signal), and was, successively, laborer, clerk, foreman, field engineer, assistant sales manager, assistant general manager, assistant to vice-president, and vice-president and director.



George O. Hagenbach

Mr. Hagenbach began his career in 1911 in the test department of the Stromberg Carlson Telephone Company, Rochester, and later worked for the Central District & Printing Telegraph Co. and the Rochester Gas & Electric Corp. He joined G.R.S. in the test department in 1913 and was transferred to the engineering department in 1916.

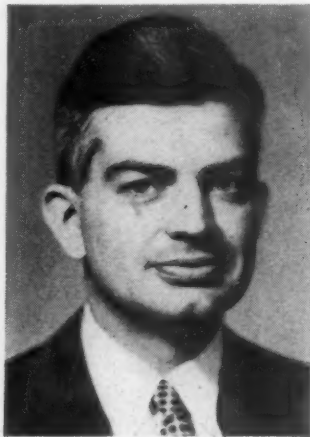


John E. Freehafer

Mr. Freehafer joined the physics department of Western Reserve University, Cleveland, in 1937 and left in 1940 to join the mathematics department of Newark College of Engineering, Newark, N. J. He worked in the radiation laboratory of Massachusetts Institute of Technology from 1942 to 1946. In the latter year he joined G.R.S. as physicist, which position he held at the time of his recent appointment.

Mr. Phelps was first employed in a

valuation survey for the Rochester Gas & Electric Corp. and in 1939 joined the Consolidated Machine Tool Corporation of Rochester as apprentice engineer. He went to General Railway



Stuart Mason Phelps

Signal as test engineer in 1940, was engaged in development work in 1945, and was appointed engineer on car retarder applications in 1948.

**Richard P. Carroll** has been appointed production control manager for the **Hunt-Spiller Manufacturing Corporation**, Boston, and will continue to be in charge of cost and materials controls.

**Walter H. Creber, Jr.**, has been appointed sales manager of the **Chicago Steel Service Company**, with headquarters at the company's new general office and warehouse on Kildare avenue at 45th street.

The **Irvington Varnish & Insulator Co.**, Irvington, N. J., has appointed the **Franklin Railway Supply Company**, 60 East 42nd street, New York, as its exclusive representative in the railroad field.

**E. L. Santner**, formerly district manager of the **Diamond Alkali Company**, at Painesville, Ohio, has been appointed assistant general traffic manager in charge of transportation and services, with headquarters at Cleveland.

**V. de P. Gerbereux**, formerly assistant manager of the centrifugal pump sales division of the **Worthington Pump & Machinery Corp.**, has been appointed manager of the division, to succeed **A. H. Borchardt**, whose recent election as vice-president was announced in *Railway Age*, July 30, page 52.

The **Dow Corning Corporation** has moved to 600 Fifth avenue, New York 20.

**W. E. Guy** has been appointed Chicago district manager of the **Gray-**



**W. H. Mowers, Jr.**, who has been appointed eastern sales representative for **Union Asbestos & Rubber Co.**, Chicago. He will be located at the company's branch office in New York. Mr. Mowers previously served as administrative assistant in the railroad sales department at Chicago

**bar Electric Company** to succeed **G. J. Cossmann**, who has retired after more than 51 years of service. Mr. Guy joined Graybar as a salesman in 1924 and was appointed manager of the Hammond branch six years later. In 1939 he was transferred to Los Angeles as sales manager, and in 1944 returned to Chicago as district sales manager. He was appointed assistant district manager early this year.

## OBITUARY

**William C. Johnson**, 49, executive vice-president of the **Allis-Chalmers manufacturing Company**, died of a heart attack on July 26.

**Alfred G. York**, a director and vice-president of the **Watson-Stillman Company**, Roselle, N. J., died on July 22, after a prolonged illness.

## ORGANIZATIONS

The fall meeting of the **New England Shippers Advisory Board** is scheduled for September 26, 27 and 28, at the Mount Washington Hotel in Bretton Woods, N. H.

The sixth convention and exhibit show of the **National Defense Transportation Association**, sponsored by the San Antonio chapter, will be held in San Antonio, Tex., October 8, 9 and 10.

The **National Association of Railroad and Utilities Commissioners** will hold its annual convention October 16-19 at the Francis Marion Hotel, Charleston, S. C.

# Esso Diesel Fuel

*"Tailor-made" to  
railroad specifications*



**ESSO DIESEL FUEL** has been specifically developed to meet the requirements of railroad diesels. In one of the most exacting tests ever conducted Esso Diesel Fuel was proved on the run through over 300,000 miles of actual railroad operations in a diesel engine. For an economical, dependable diesel fuel specify ESSO.

**BACKED BY CONSTANT RESEARCH** — keeping pace with latest engine design and developments Esso Railroad Products are constantly being tested and improved.

**BACKED BY CONSTANT FOLLOW-UP**— on-the-job check-ups by Esso Sales Engineers assure dependable performance of Esso Railroad fuels and lubricants! Be sure to call on ESSO for any railroad fuel or lubricating problem.



## **RAILROAD PRODUCTS**

**SOLD IN:** Maine, N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Penn., Del., Md., D. C., Va., W. Va., N. C., S. C., Tenn., Ark., La.

**ESSO STANDARD OIL COMPANY** — Boston, Mass. — New York, N. Y. — Elizabeth, N. J. — Philadelphia, Pa. — Baltimore, Md. — Richmond, Va. — Charleston, W. Va. — Charlotte, N. C. — Columbia, S. C. — Memphis, Tenn. — New Orleans, La.



## EQUIPMENT AND SUPPLIES

### T. C. Plans Huge Equipment Purchases in Fiscal '52

The Transportation Corps has announced that it plans to purchase 6,040 pieces of railway equipment during the 1952 fiscal year. Total cost of this equipment is estimated at \$115,267,685.

The T. C. outlined its plans during the course of hearings before the House Appropriations Committee. It is understood that acquisition of this equipment will depend "on how the national steel picture shapes up," assuming that Congress appropriates the money.

A breakdown of the new equipment is as follows:

426 diesel-electric locomotives	\$69,490,000
57 railway cranes	2,926,000
2,312 boxcars	10,638,000
100 refrigerator cars	800,000
878 flatcars	9,240,000
648 tank cars	4,366,000
1,208 open cars	4,876,000
254 inspection and maintenance cars	176,685
147 special cars	12,755,000

During the hearings before the House group, spokesmen for the T. C. said this rolling stock and motive power is for use in this country and overseas, and limited quantities will be used for a "mobilization reserve."

### FREIGHT CARS

#### 5,290 Freight Cars Delivered in July

July production of new freight cars for domestic use totaled 5,290 units, the American Railway Car Institute and the Association of American Railroads announced jointly last week. The substantial drop from June deliveries of 9,644 cars resulted primarily from strikes in seven plants of four different car builders plus floods which affected production in the middle west, the announcement said.

"This serious curtailment in the freight-car building program," the statement added, "comes subsequent to a time when production had virtually reached the 10,000-cars-per-month goal set by government defense agencies, freight-car construc-

Type	Ordered July 1951	Delivered July 1951	On Order & Undelivered Aug. 1, 1951
Box—Plain	1,428	1,741	48,906
Box—Auto	—	—	2,050
Flat	6	211	3,912
Gondola	—	1,545	27,694
Hopper	200	675	37,368
Covered Hopper	637	74	5,444
Refrigerator	—	329	6,720
Stock	—	—	1,000
Tank	144	701	10,282
Caboose	2	14	476
Other	—	—	958
<b>TOTAL</b>	<b>2,417</b>	<b>5,290</b>	<b>144,810</b>
Carbuilders	1,017	4,014	98,979
Railroad Shops	1,400	1,276	45,831



**PULLMAN DELIVERS FIRST DOZERS—** Shown here being shipped from the Hammond, Ind., plant of the Pullman-Standard Car Manufacturing Company is a load of International TD 24 tractors equipped with the first hydraulic dozers built by Pullman-Standard since it

acquired the Road Equipment division of the Isaacson Iron Works. The tractors are shipped to Hammond from the nearby International Harvester plant at Melrose Park, Ill. At Hammond Pullman-Standard attaches the road equipment (bulldozer blades, etc.)

tion having been expanded from 3,464 cars in July of last year to above 9,000 cars in June of this year."

Orders for 2,417 new freight cars were placed in July. The backlog of cars on order on August 1 was 144,810. A breakdown of cars ordered and delivered in July, and of cars on order on August 1, is given in the accompanying table.

The Canadian National has ordered 125 70-ton covered hopper cars from the Canadian Car & Foundry Co.

### LOCOMOTIVES

**Missouri Pacific**—The 126 diesel-electric locomotive units purchased by this line, as announced in last week's Railway Age, will be built by the Electro-Motive Division of the General Motors Corp., American Locomotive Company, and Baldwin-Lima-Hamilton.

Electro-Motive will build 18 2,250-hp. passenger units, and 55 1,500-hp. road switching units. American Locomotive will build a total of 40 "A" and "B" 1,500-hp. road freight units. Baldwin-Lima-Hamilton will build 13 1,000-hp. switching units. The total purchase will aggregate approximately \$21 million, with delivery expected to start next January and to be completed by August, 1952.

### PASSENGER CARS

The Canadian National has ordered 30 76-ft. baggage cars from the National Steel Car Corporation.

The Union Pacific and the Chicago & North Western are reported

to be inquiring for 23 passenger cars for use in their joint services.

### SIGNALING

The Chicago, Milwaukee, St. Paul & Pacific, has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to install C.T.C. for control of interlocking facilities on double track between Jackson street, St. Paul, and the yard office at South Minneapolis. The order includes two style B-30 control machines, one to be installed at the South Minneapolis yard office. In addition to code equipment, the order includes style H-2 searchlight signals, M-23B dual-control electric switch machines, SL-25 electric switch locks, switch circuit controllers, relays, rectifiers, transformers and housings. Field installation will be handled by railroad forces.

The International-Great Northern (Missouri Pacific Lines) has ordered equipment from the General Railway Signal Company for installation of a coded interlocking at Palestine, Tex. The control machine will have 18 track lights and 15 levers for control of 11 switch machines, one switch lock and 27 signals. Included in this order are types G and MD color-light signals, model 5D switch machines and type B relays.

### MARINE

The Baltimore & Ohio and the Central of New Jersey have each ordered four 110-ft. tugboats from the RTC Shipbuilding Corporation, Camden, N. J. Each boat will be powered

with a Fairbanks, Morse 1,600-hp. 10-cylinder opposed-piston diesel engine. All are scheduled for delivery within 19 months.

The **Delaware, Lackawanna & Western** has ordered 30 deck scows and 10 covered barges from the Staten Island yard of the Bethlehem Steel Company. Deliveries are scheduled to begin next December.

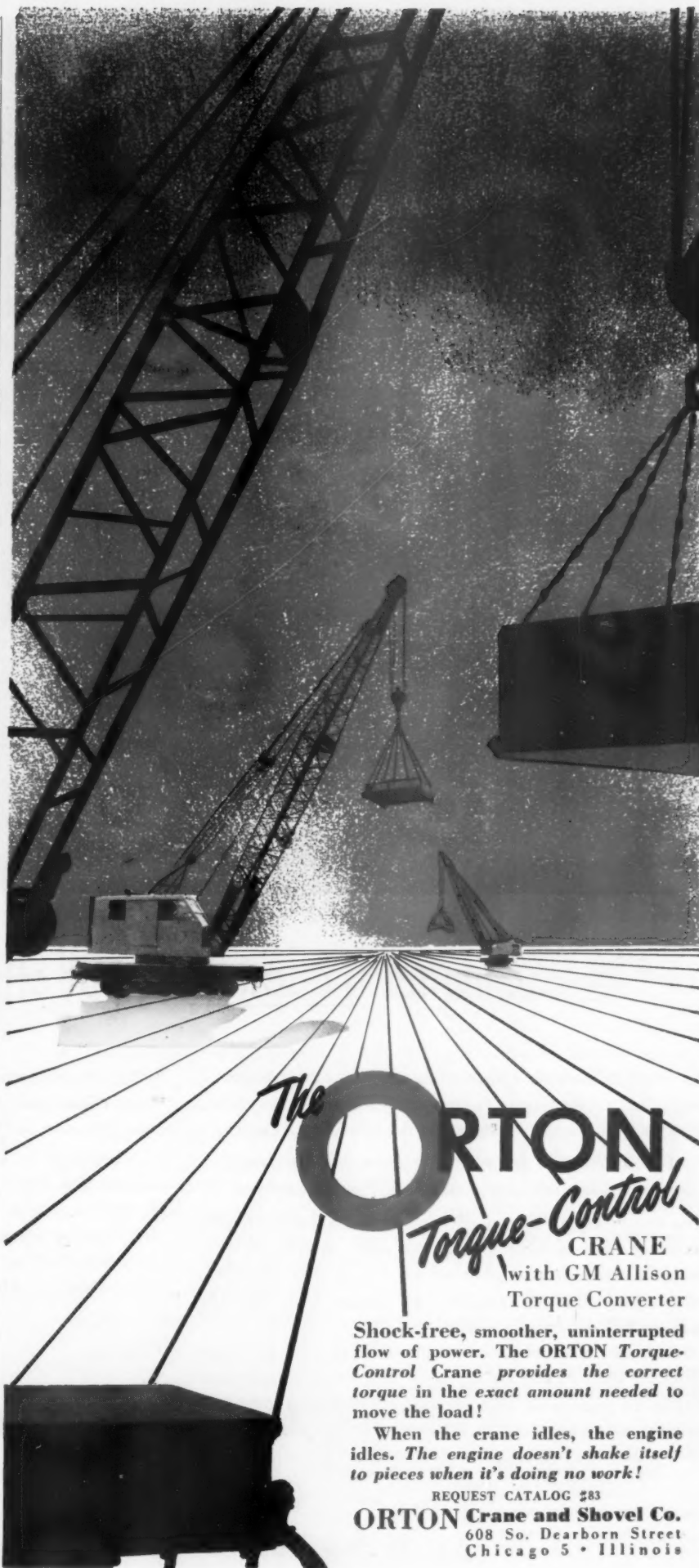
## CONSTRUCTION

**Atlantic Coast Line.**—Construction by this road of a 2.4-mile line in Polk county, Fla., has been approved by the I.C.C. The line will serve a new \$10,000,000 plant of the International Minerals & Chemical Corp., as well as an existing plant of the Oak Ridge Sand Company. The A.C.L. will meet the cost of the new line, estimated at \$80,433, out of current funds.

**Chicago, Burlington & Quincy.**—This road has asked the I.C.C. for authority to construct, at an estimated cost of \$315,000, a 2.9-mile line from Mermet, Ill., to Joppa, to serve a new steam electric plant at Joppa. This electric plant is expected to use from 1.5 to 2.6 million tons of coal annually, the application said. Cost of the new line would be paid from current funds.

**Elgin, Joliet & Eastern.**—Authority has been received from the National Production Authority for construction of a new general office building at East Joliet, Ill. The two-story building—to be known as the office and operations building—will measure approximately 62 ft. by 200 ft., and will cost \$453,500, exclusive of land and similar items. It will be located east of the present storehouse and north of the present general offices at East Joliet, and will be of modern reinforced concrete construction. It will include kitchen and lunch room facilities for employees. The contract for construction has been awarded to Sherman Olson, Inc., of Chicago, which will start construction before August 16; the building is scheduled for completion by May 1952. Employees now located at East Joliet and those located in the Joliet building in the downtown section of the city will be housed in the new building.

**Jersey Central Lines.**—A contract for grading the earth fill which will replace the New York & Long Island Branch's present wooden trestle at Matawan, N. J., has been awarded to J. Rich Steers, Inc., New York (*Railway Age*, April 23, page 51.) The work will cost an estimated \$585,000. The Ferguson & Edmond-



*The* **ORTON**  
*Torque-Control*  
CRANE  
with GM Allison  
Torque Converter

Shock-free, smoother, uninterrupted flow of power. The ORTON Torque-Control Crane provides the correct torque in the exact amount needed to move the load!

When the crane idles, the engine idles. The engine doesn't shake itself to pieces when it's doing no work!

REQUEST CATALOG 283

**ORTON Crane and Shovel Co.**  
608 So. Dearborn Street  
Chicago 5 • Illinois



"It's costing us thousands to put off this decision!"

The gentlemen above are debating whether or not to modernize their car heating systems with Honeywell equipment. The man in the center is delivering the clinching argument...

*"I firmly believe," he says, "that Honeywell Car Heating Systems would save us tens of thousands of dollars every year!"*

Is he exaggerating? Not at all! You see, Honeywell Systems have much less undercar piping, are much simpler in construction than conventional systems. This greatly cuts down on heating system inspection and maintenance, virtually ends your frozen pipe problem.

Moreover, Honeywell Systems save up to 40% on steam—because they expose steam to icy air only through short lengths of pipe. This saves money on fuel, helps you heat longer trains—reduces the number of trains made late by slow orders for heating.

Moreover, Honeywell Systems make your passengers much more comfortable. Honeywell *electronic* thermostats provide *really* accurate and reliable temperature control.

How much money are *you* losing by postponing this decision? The figure may be much higher than you think! Better take steps now to find out how much Honeywell Car Heating Systems can save *your* railroad. Call your local Honeywell office. Or write Honeywell, Dept. RA-8-153, Minneapolis 8, Minnesota.



MINNEAPOLIS  
**Honeywell**

*First in Controls*



son Co., Pittsburgh, has received a contract for grading and yard improvements on the Central of Pennsylvania at Allentown, Pa., to cost an estimated \$480,000. Another contract, for a signal tower at Allentown, has been awarded to Earl W. Ecker, Inc. Bethlehem, Pa., at an estimated cost of \$26,665.

**New York Central.**—A \$300,000 program for expansion of track facilities at its Elkhart, Ind., yards is part of this road's program for improving service to and through the Chicago gateway. This project is linked with the recently announced yard improvement program of the Indiana Harbor Belt — an N.Y.C. affiliate — at Hammond, Ind. (*Railway Age*, August 6, page 87). It calls for construction of two new tracks in the westbound receiving yard, with a capacity of 130 cars each. Two new tracks will be constructed in the eastbound receiving yard, and two existing tracks will be lengthened to a capacity of 125 cars each. This increased track capacity is expected to eliminate terminal delays, expedite car handling and the turning of power and crews. All work, except a small amount of grading, will be handled by company forces.

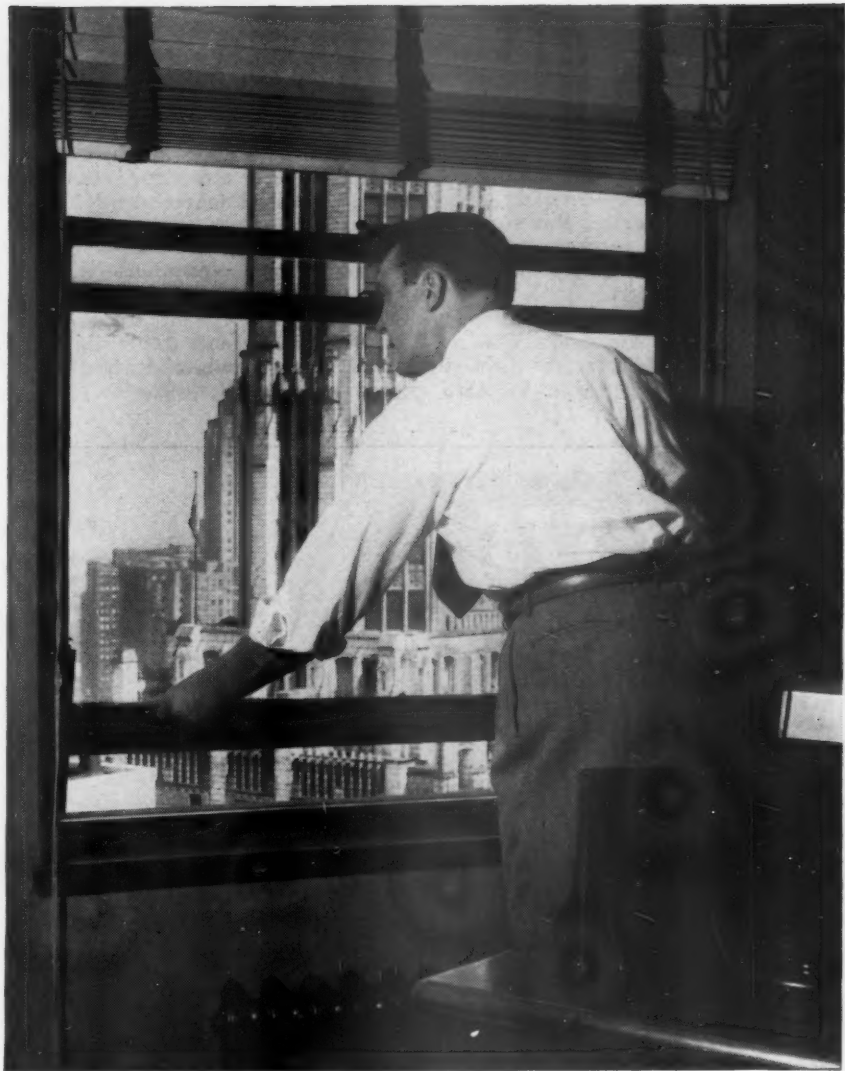
## FINANCIAL

### R.F.C. Seeks Bids for Sale Of Seaboard Securities

The Reconstruction Finance Corporation has asked for public bids on its holdings of Seaboard Air Line stocks and bonds. The agency holds 102,273 shares of Seaboard common and 9,543 shares of a series A 5 per cent preferred stock. In addition, it has \$5,785,872 of the road's 4½ per cent series A general mortgage income bonds. Bids on these securities must be submitted to the R.F.C. on or before August 21.

The 102,273 shares of common stock held by the agency represent about 12 per cent of the road's outstanding common. This, together with other Seaboard holdings, was acquired by the R.F.C. in connection with the Seaboard's reorganization.

Other railroad securities are held by the R.F.C., and the agency has announced that it plans to dispose of these from time to time. Included in these holdings are the following: *Central of Georgia*—\$35,803 first mortgage 4 per cent bonds, \$55,346 general mortgage 4.5 per cent bonds, income series B, voting trust certificates of 711.5 shares of series B preferred stock, and voting trust certificates for 121,251 shares of common; *Denver & Rio Grande Western*—\$5,200,000 first mortgage 4 per cent bonds, and \$8,700,605 series A income mortgage



## How much money are you losing here?

When you see open windows in your buildings during the heating season, you're wasting fuel—as much as 20% per year! You're overheating parts of your buildings in order to keep the other parts comfortable.

Such losses are often caused by failure of worn-out heating controls to operate properly. If that's true in your case, there's an easy way to modernize your control system. Simply replace your old instruments one or two at a time—out of your maintenance budget! No need to ask for a special appropriation, no need to make structural changes! And the savings in fuel should quickly pay for the new equipment.

For a free survey of *your* heating control needs, call your local Honeywell office. Or write Honeywell, Dept. RA-8-153, Minneapolis 8, Minnesota.

MINNEAPOLIS  
**Honeywell**



*First in Controls*

bonds, 4.5 per cent; *Erie*—\$10,571,000 series A income mortgage bonds, 4.5 per cent; and *Western Pacific*—17,788 shares of 5 per cent series A preferred stock and 15,783 shares of common.

**Alabama Great Southern.** — *Purchase and Lease.*—Division 4 of the I.C.C. has authorized this road to purchase from the Southern approximately 5.7 acres of land, together with yard tracks and other facilities, at Meridian, Miss. The A.G.S. will pay \$41,800 for the land and facilities. In a separate proceeding, the division also authorized the A.G.S. to lease

approximately 10.3 miles of rail line from the Southern. This segment extends from York, Ala., to Lilita, and rental payments will amount to \$10 a year, plus maintenance costs. The A.G.S. is controlled by the Southern through stock ownership, but operates its system independently.

**Chicago, Burlington & Quincy.** — *Spur Track Operation.*—This road has asked the I.C.C. to approve its use of a 9-mile spur track between Lewiston, Ill., and South Liverpool. This is the line over which the C.B.&Q. was recently charged with operating

"without having applied for — or obtained a certificate of public convenience and necessity." (*Railway Age*, July 2, page 34.) In its present application, the road said the spur is used solely for movement of coal, all of which is shipped beyond South Liverpool by water carrier. It asked the commission to find that it has no jurisdiction over the line.

**Consolidated of Cuba.**—*Recapitalization.*—Plans for recapitalization and adjustment of the bonded debt of this company and of various others in same group have been approved by stockholders of each of the companies. The plans include recapitalization of the Consolidated and the Cuba and adjustments in the debt structures of the Cuba, the Cuba Northern and the Guantanamo Northern. Offers to various classes of shareholders and bondholders will be made this fall.

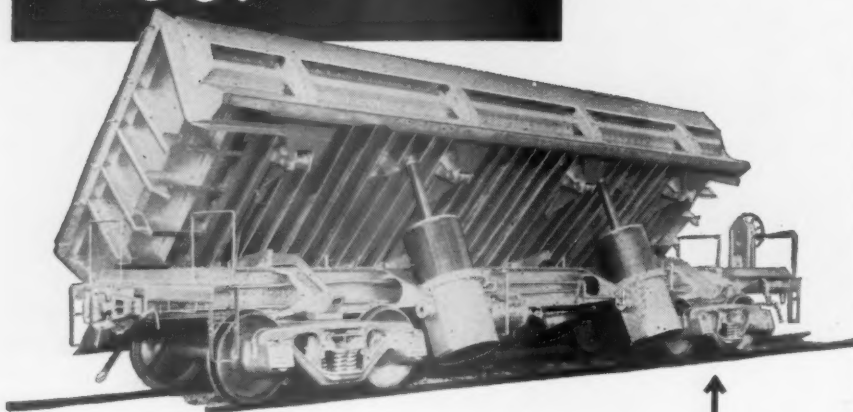
**Long Island.** — *Reorganization.* — Division 4 of the I.C.C. has approved payment of \$30,000 a year to William H. Draper, Jr., as trustee of this road. Mr. Draper was appointed trustee of the L.I. on December 8, 1950, by the U.S. District Court for the Eastern District of New York. (*Railway Age*, December 16, 1950, page 66.)

**Missouri-Kansas-Texas.** — *Recapitalization.*—The problem of formulating a plan of voluntary adjustment which will place "on a sound and practical basis" this road's capital stock, including dividends of \$138.25 a share and totaling \$92,213,000 on the 7 per cent cumulative preferred stock, "is having active consideration," R. J. Morfa, chairman, and D. V. Fraser, president, said in a midyear report to Katy stockholders. "Independent consulting engineers are presently engaged in developing certain data for management's use in devising a fair and equitable plan which may be approved by the Interstate Commerce Commission and acceptable to the affected stockholders," they added. "It is anticipated that such a plan will be available for consideration at about the time that the adjustment mortgage bond interest is on a current basis." Liquidation of the interest arrearage on these bonds, which now totals \$1,355,586.48, will depend upon the amount of funds that can be made available out of current earnings, which also must be used to pay equipment obligation and collateral trust note maturities and to finance the cost of improvements and additions to roadway and equipment, Messrs. Morfa and Fraser explained.

**Nashville, Chattanooga & St. Louis.**—*New Director.*—John E. Tilford, president of the Louisville & Nashville, has been elected to this road's board of directors.

**Tavares & Gulf.**—*Bond Extension.*—Division 4 of the I.C.C. has (Continued on page 79)

**BOOSTS  
EARNINGS  
TOO!**



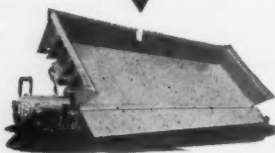
The Differential Air Dump Car has a way with operating expenses — cuts 'em down!

There's another pair of massive muscles on the other side of the car, too, means two-way dumping and greater flexibility.

They're built to take rough treatment — whether it's the slam-banging of the clam or the sudden dumping of tons of hot slag. These cars can take it and can come back faster for more.

Higher ratio of payload to dead weight! Fewer trips to the shop and shorter stays when they do go! Add all these up and it spells lower operating costs — another way to say "Boosted Earnings". Write for the full story on these cars.

DUMPS  
BOTH  
WAYS

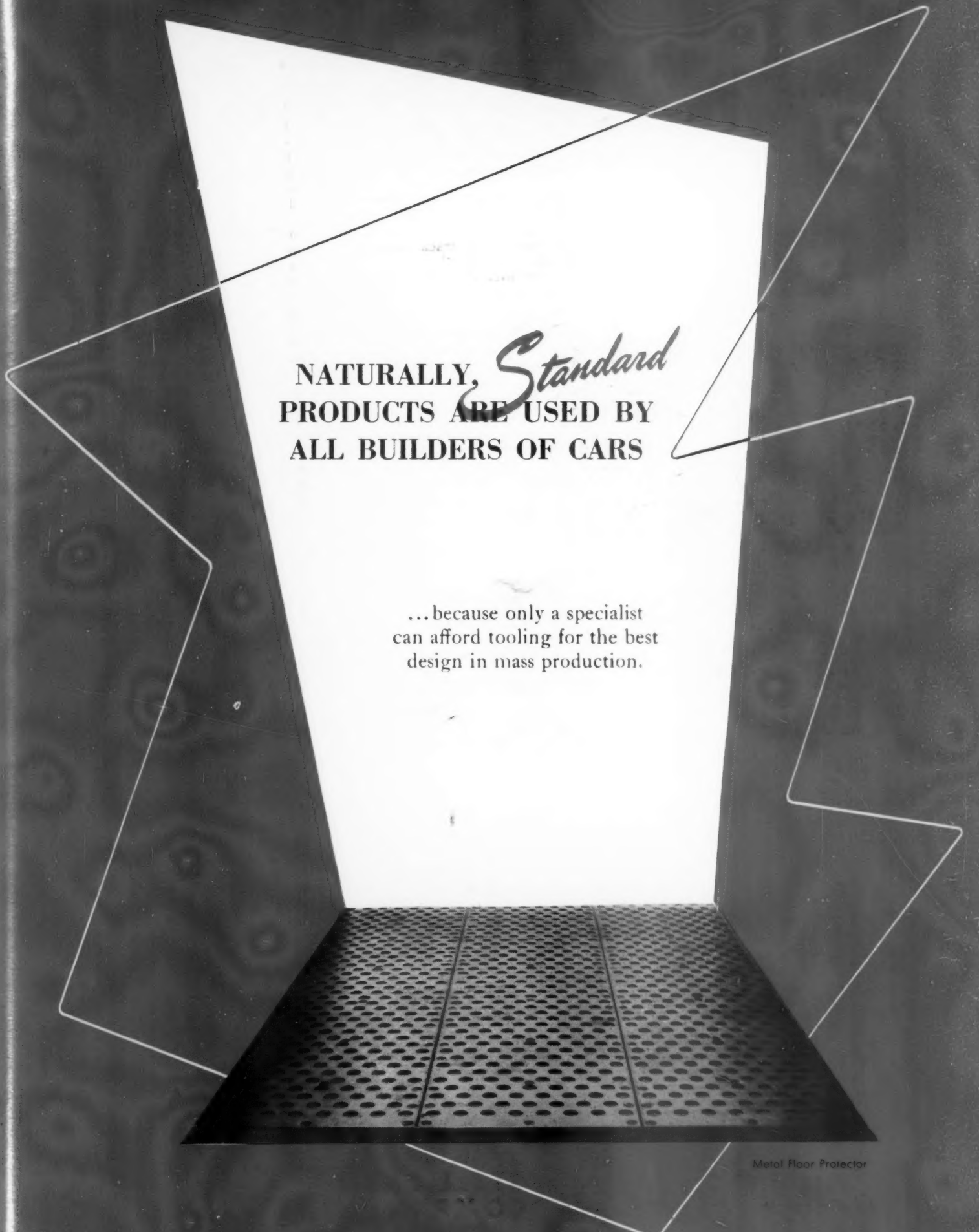


Other Differential Products: Locomotives, Mine Cars, Mine Supply Cars, Rock Larries, Mantrip Cars, Dumping Devices and Complete Haulage Systems.

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PRODUCTS ARE USED BY  
ALL BUILDERS OF CARS

...because only a specialist  
can afford tooling for the best  
design in mass production.

Metal Floor Protector

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## **SOMETHING MISSING?**

**A**s far as the eye can tell, about 3900 cubic feet of revenue-producing capacity is missing from this train. That's only one car, of course. But it might be a case of "for want of a car the shipper was lost"... to paraphrase a familiar fable. ✱ The Railroads can ill afford to be "missing" freight cars... out for repair constantly. Replacement of outmoded cars is a necessity in the critical days ahead. Production must hum and goods must move. Moving raw materials and finished

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products in tremendous quantities has always been done best...and fastest...by the Railroads. A word, then, to Railroad Executives: Call in an **A.C.F.** Representative and consult with him on the "missing links" *your* road requires to provide this vital freight service. Nobody builds better freight cars than **A.C.F.** American Car and Foundry Company, New York • Chicago • St. Louis • Philadelphia Washington • Cleveland • San Francisco.

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**CAR BUILDERS**

**TO AMERICA'S RAILROADS**



# Libbey-ZONE Lifts Threat Of Huge Bridge Fire Loss

## 8 More Vital Bridges Treated After Railroad's Own Rigid Test

Convinced by its own rigid test, a major American railroad recently ordered that the new Libbey-ZONE Process be used to protect fire-susceptible decks of eight of its most vital mainline bridges.

The test structure itself was (and is) an important span—a 266-foot, double-track bridge in a large mid-western city. Previous to the Libbey-ZONE treatment, several small fires had been reported on the heavy-traffic structure (94 trains daily).

Fortunately there had never been serious fire damage to the structure. But the frequent small blazes required utmost vigilance continuously so the fires could be extinguished before they did real damage.

### Test Bridge Plagued by Fires

But always there was the forebod-

ing that some day a blaze might not be seen in time. That the fire might spread and do enough damage to make the bridge impassable and inflict huge losses through traffic delay and re-routing.

The bridge was an ideal proving ground for the Libbey-ZONE Process, which is offered exclusively by THE ZONE COMPANY of Fort Worth, Texas.

The simple, economical process was applied to the bridge. First, application (by spray) of ZONE HEAVY-DUTY Bridge Coating (an asphalt compound) over exposed wood surfaces. Then, embedment of clean pea-sized gravel in the coating.

### Libbey-ZONE Coating Applied

Result: A tough, non-inflammable shield which keeps white-hot brake shoe splinters, sparks and other burning materials from contacting the wood members.

(Advertisement)

More than a year passed, and not a single blaze was reported on the bridge. The railroad's fire prevention engineer inspected the bridge 18 months after the Libbey-ZONE application—and found decks and ties still fully protected.

The engineer's report and recommendation prompted the company's engineering department to prescribe the Libbey-ZONE treatment for eight more important bridges. (If any of these bridges should become impassable, traffic detours would be long and costly—about 400 miles on the average).

### No Blazes on Protected Decks

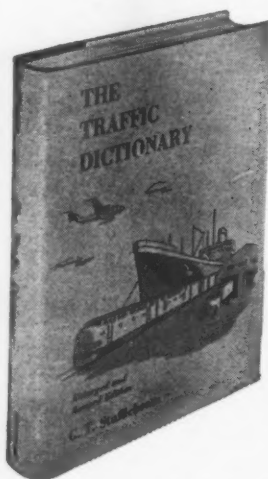
Libbey-ZONE applications to these structures were made almost a year ago. And as this is written, no fires have been reported as starting on the protected bridge decks.

A score of railroads—having used the nine-year-old Libbey-ZONE Process on half a million lineal feet of bridge decks—have enjoyed similar freedom from fire. One protected bridge deck wasn't even harmed when a boiler exploded just above it.

Further information about the Libbey-ZONE process and experiences of its users will be readily supplied by THE ZONE COMPANY, Department RA, Box 789, Fort Worth 1, Texas.

New Fourth Edition

## THE TRAFFIC DICTIONARY



By GEORGE T. STUFFLEBEAM  
*Manager, Transportation  
Research, Remington-Rand*  
Enlarged and brought up to date this handbook contains 4,000 terms, phrases, code marks and abbreviations used in all branches of transportation. Terms used in warehousing, shipping documents, claim procedure and practice before the I.C.C. are included. Not only traffic managers but anyone concerned with shipping or traffic department work needs a copy of this standard reference.

320 pages, 4½ x 6, \$3.75

### SENT ON TEN DAYS' APPROVAL

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Please send me a copy of the new edition of Stufflebeam's TRAFFIC DICTIONARY, on Ten Days' Approval. If satisfactory I will remit the list price of \$3.75; otherwise I will return the book.

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(This offer is limited to retail customers in the United States) R.A. 8-13-51



This new book is beautifully illustrated with 116 fine 8½ x 5-inch photographs of railroading in and around New York. Authoritative information is given on how this intricate rail network operates. Latest official five-color New York Harbor Terminals and Rapid Transit System maps show all points of interest to railroad men. Ask to see a copy at your local bookstore or send for one on ten days' approval.

144 pages, 116 illus., 2 maps, 10½ x 8, boards, \$4.00

### Book Department

SIMMONS-BOARDMAN PUBLISHING CORP.

30 Church Street

New York 7, N. Y.



(Continued from page 74)

authorized this road to extend from March 1, 1948, to March 1, 1958, the maturity date of \$297,500 of its series A first mortgage bonds. The interest rate on the extended bonds will be increased from 3 per cent to 3½ per cent. All the series A bonds are held by the Southeastern Investment Company, a wholly owned subsidiary of the Seaboard.

## New Securities

Division 4 of the I.C.C. has authorized:

**EAST BROAD TOP RAILROAD & COAL CO.**—To refund its present outstanding bonds by issuing a new \$1,000,000 first and refunding mortgage bond. This new bond will be delivered to the Rockhill Coal Company, which holds all the present bonds and owns all the stock of the line. The new bond, with interest at 6 per cent, will mature January 1, 1958. (*Railway Age*, July 16, page 70.)

**ST. LOUIS-SAN FRANCISCO.**—To assume liability for \$5,085,000 of series I equipment trust certificates to finance in part 42 diesel-electric locomotives, costing an estimated \$6,356,865. (*Railway Age*, July 23, page 63.) The commission report approved sale of the certificates at 99.0269, with interest at 2½ per cent—the bid of Salomon Bros. & Hutzler and three associates. This will make the average annual cost of the proceeds approximately 3.05 per cent. The certificates were reoffered to the public at prices yielding from 2.4 to 3.025 per cent, according to maturity.

## Dividends Declared

Atlanta & West Point.—\$1, payable August 1 to holders of record July 24.

Fort Wayne & Jackson.—5½% preferred, \$2.75, semiannual, payable September 4 to holders of record August 21.

Maine Central.—6% prior preferred, \$1.50, quarterly, payable October 1 to holders of record September 24.

Pittsburgh, Youngstown & Ashtabula.—7% preferred, \$1.75, quarterly, payable September 4 to holders of record August 20.

St. Louis-San Francisco.—62½%, payable September 15 to holders of record September 1.

Western of Alabama.—\$4, payable August 1 to holders of record July 24.

## Security Price Averages

	Aug. 7	Previous week	Last year
Average price of 20 representative railway stocks	54.60	53.22	42.42
Average price of 20 representative railway bonds	92.37	92.17	95.23

## ABANDONMENTS

**Chicago & North Western.**—The I.C.C. has postponed, for an indefinite time, the effective date of an order authorizing this road to abandon a 7.5-mile line between Gillette, Wis., and Oconto Falls. (*Railway Age*, July 16, page 67.) Various protestants have asked for a rehearing and reconsideration of the case.

Application has been filed with the I.C.C. by:

**CENTRAL OF GEORGIA.**—To abandon its so-called Margaret division, consisting of approximately 11.5 miles of main line and 8 miles of side track. Coal mines formerly served by this line have been worked out, and train service was discontinued in November 1950, the application said.

**CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.**—To abandon an 18.2-mile line between Zumbro Falls, Minn., and Zumbrota. The application said there is "no reasonable prospect" of increasing the business of this line.

**HELENA & NORTHWESTERN.**—To abandon its

entire line, 53.5 miles, extending from Helena, Ark., to Cotton Plant. The road said it has current indebtedness of \$182,000, and the I.C.C. has refused it permission to apply for a loan from the Reconstruction Finance Corporation. It added that it cannot obtain money elsewhere, and the U. S. District Court for the Eastern District of Arkansas has refused to permit the road to get relief under Section 77 of the Bankruptcy Act. The road's application said continued operation on a sound financial basis "is both impractical and impossible."

**INDIANA & MICHIGAN ELECTRIC CO.**—To abandon a 0.3-mile switching line at Fort Wayne, Ind., and to abandon operation over an additional 1.1-mile segment in the same city. The latter segment is owned by Fort Wayne Transit, Inc. In its application the electric company said traffic does not warrant continued operation of the two lines.

Division 4 of the I.C.C. has authorized:

**LEHIGH & NEW ENGLAND.**—To abandon its Summit Hill branch, approximately 3.5 miles, in Carbon county, Pa.

**LEHIGH VALLEY.**—To abandon 3.4 miles of its Ashland branch in Schuylkill county, Pa. There has been no train service over the line since August 1949.

**MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.**—To abandon operation of a Wisconsin Central branch from Chelsea, Wis., to Rib Lake, 5.5 miles. The W. C. will abandon the line. Division 4 said neither present nor prospective traffic warrants rehabilitation and continued operation of the branch.

## RAILWAY OFFICERS

### EXECUTIVE

Glenn Carlyle Lace, who has been appointed assistant to vice-president of the RAILWAY EXPRESS AGENCY, with headquarters at Chicago (*Railway Age*, July 2), was born on February 2, 1901, at Davis Junction, Ill. Mr. Lace started with Railway Express and its predecessors in March 1920 at Rockford, Ill., and later moved to Chicago, where he served successively as



Glenn Carlyle Lace

district sales manager, district manager of public relations and manager of air express. Appointed superintendent, Central Illinois division, in March 1946, he became superintendent of organization in April 1947. Before his new appointment he had served as superintendent, Detroit division, at Detroit since January 1950.

L. A. Putnam, chairman of the

board of directors of the Rutland has assumed the acting presidency of that company pending election of a permanent successor to the late William E. Navin, whose death was reported in *Railway Age*, August 6, page 99. Mr. Putnam is also president of the Barre & Chelsea and the St. Johnsbury & Lamoille County.

## FINANCIAL, LEGAL & ACCOUNTING

Bernard D. Helmken, assistant secretary of the CENTRAL OF GEORGIA, has been elected secretary, at Savannah, Ga., succeeding Frank S. Baggett, who will retire on September 1, on account of ill health. Miss Mary Margaret McLaughlin, secretary to the assistant to the president has been elected assistant secretary. Mr. Baggett entered the service of the C. of Ga. in 1918 as secretary to the president and was promoted to statistician to the president in March 1922. He became secretary of the company in April 1940.

Charles DiMarco has been appointed auditor of the GRAND TRUNK WESTERN (part of the CANADIAN NATIONAL), at Detroit. He formerly served as auditor of the DULUTH WINNIPEG & PACIFIC (also C.N.) at Duluth. In his new position Mr. DiMarco succeeds D. M. Kerr, who has been promoted to acting general manager of the CENTRAL VERMONT (*Railway Age*, July 23).

Frank H. Cole, Jr., assistant general counsel of the BALTIMORE & OHIO, has been appointed general attorney, with headquarters as before at Cincinnati, succeeding William A. Eggers, who has retired at his own request, after more than 44 years of service.

## OPERATING

Horace W. Waters, trainmaster of the Macon division of the CENTRAL OF GEORGIA, has been appointed superintendent of that division at Macon, Ga., succeeding Samuel G. Roney, who will retire on September 1 after more than a half century of railroad service, including 35 years on the C. of Ga. J. C. Hydrick, general yardmaster at Columbus, Ga., will succeed Mr. Waters at Macon. Fred C. Laing, train dispatcher on the Macon division, has been appointed trainmaster of that division at Albany, Ga., succeeding C. P. LeSueur, who died on July 20. Mr. Roney entered railroad service in 1899 with the Southern and remained with that road until 1914. He joined the C. of Ga. in March 1916 as special agent on the old Southwestern division, subsequently becoming locomotive engineer. He then served as captain of police for

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the Central and Ocean Steamship Company terminals at Savannah, road foreman of engines on the Macon division, trainmaster, assistant superintendent of the old Chattanooga division and trainmaster of the Macon division. He became superintendent of the Macon division on March 1, 1942.

**E. H. Goodrich**, superintendent of the St. Louis division of the RAILWAY EXPRESS AGENCY at St. Louis, has retired following 49 years' service. His successor is **F. E. Horning**, superintendent of organization, Eastern departments, at New York. A native of Milford, Conn., Mr. Goodrich began his career with Railway Express and its predecessors at Savannah, Ga.; in 1924 moved to Charlotte, N. C., as superintendent, and in 1938 transferred to Jacksonville, Fla., in the same capacity. He served as superintendent at Meridian, Miss., prior to becoming superintendent at St. Louis.

As reported in *Railway Age* July 2, **R. J. H. Wood** has been appointed superintendent of transportation of the Montreal district of the CANADIAN NATIONAL at Montreal. Mr. Wood was born at Cornwall, Ont., and began his



**R. J. H. Wood**

railway career there as an operator with the Grand Trunk (C. N.) in 1911, subsequently serving as despatcher. He became chief despatcher at Montreal in 1938.

**I. E. Hamilton**, trainmaster of the FLORIDA EAST COAST at Miami, has been appointed assistant superintendent at New Smyrna Beach, Fla.

**Alva E. Bond**, assistant superintendent of the CENTRAL VERMONT at New London, Conn., has been appointed superintendent at St. Albans, Vt., with jurisdiction over both the Northern and Southern divisions. **Joseph C. Bothwell**, special accountant at St. Albans, succeeds Mr. Bond.

## TRAFFIC

**E. D. Poulson**, general agent, passenger department, of the CHICAGO & NORTH WESTERN at Milwaukee, has

been promoted to assistant general passenger agent at Chicago. **G. G. MacCarthy**, assistant to the general passenger agent at St. Paul, succeeds Mr. Poulson.

**F. A. Bowers, Jr.**, traveling freight agent of the CENTRAL OF GEORGIA, has been appointed assistant general passenger agent, with headquarters as before at Chicago, succeeding **Vernon C. Trayser**, who has been appointed general agent at Chicago (*Railway Age*, July 2).

**Charles A. Thoma**, general agent of the PITTSBURGH & WEST VIRGINIA, has been appointed general eastern agent, with headquarters as before at New York. The position of general agent has been abolished.

The SWISS FEDERAL RAILWAYS have moved their New York office to 10 West 49th street, at Rockefeller Plaza, New York 20.

**Dale J. Luebben**, formerly chief clerk in the coal traffic department of the CHESAPEAKE & OHIO at Toledo, Ohio, has been appointed assistant coal traffic agent at Chicago.

**Earle A. Williams**, industrial agent on the ST. LOUIS-SAN FRANCISCO at St. Louis, has been promoted to general industrial agent, to succeed the late **Miles L. Austin**, whose death was reported in the June 18 *Railway Age*. **E. A. Lawler** and **J. F. Mohan**, assistant industrial agents, have been appointed industrial agents.

**Walter Byrns**, district passenger agent of the ILLINOIS CENTRAL at Jackson, Miss., has retired, and is succeeded by **George E. Pickle**.

**G. H. Kerr**, assistant foreign freight agent of the CANADIAN PACIFIC, has been promoted to foreign freight agent at Concouer, B.C. He will have supervision over foreign freight traffic through Pacific ports.

**Gilbert W. Miller**, general freight agent of the BOSTON & MAINE and assistant freight traffic manager of the MAINE CENTRAL at Portland, Me., has retired after 47 years of service. **Theodore E. Grover**, general freight agent of the Me.C. at Portland has assumed the duties formerly performed by Mr. Miller. Entering railroad service in 1904 as a clerk with the B.&M., Mr. Miller served in various positions in the traffic department, including that of stenographer, commercial agent, chief clerk, general eastern agent, and assistant to traffic manager. He was appointed general freight agent of the B.&M. and the Me.C. in 1933 and in August 1934 he became assistant freight traffic manager of the Me.C., continuing as general freight agent of the B.&M.

Mr. Grover joined the Me.C. in 1946 as district freight agent, after 23 years

of freight experience on other railroads. He was promoted to general freight agent on January 1, 1951, and his jurisdiction has just been extended to cover the B.&M. and the Portland Terminal.

## MECHANICAL

As reported in *Railway Age* July 9, **Blair Leverett Thompson** has been appointed general superintendent of motive power and car equipment of the Atlantic region of the CANADIAN NATIONAL at Moncton, N. B. Mr. Thompson was born on July 20, 1906, at Moncton, where he began his career with the C.N. as a telegraph messenger in November 1923. He subsequently served as machinist apprentice, draftsman, mechanical inspector and assist-



**Blair Leverett Thompson**

ant locomotive foreman. Mr. Thompson was appointed mechanical inspector at Montreal in 1943; night superintendent at the Point St. Charles shops at Montreal on July 1, 1945; and superintendent locomotive shops in April, 1946.

He became superintendent of motive power and car equipment of the Manitoba district at Winnipeg in 1949, which position he held until his recent appointment.

**R. L. Smith**, assistant master mechanic on the SOUTHERN PACIFIC at Los Angeles, has been promoted to master mechanic there, succeeding **N. L. McCracken**, who has been appointed assistant general superintendent motive power of the PACIFIC ELECTRIC. **J. W. Ronan** succeeds Mr. Smith.

**G. Charles Hoey**, assistant mechanical engineer of the BESSEMER & LAKE ERIE, has been appointed mechanical engineer at Greenville, Pa., succeeding **C. L. Tuttle**, who has retired after 42 years of service with this road. **P. E. Engelbach**, equipment inspector, has been appointed assistant mechanical engineer. Mr. Tuttle was born at Avon, N. Y., on August 1, 1881, and received his B.S. in M.E. degree from the University





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of Michigan in 1907. He entered railroad service during the summer of 1901 as an apprentice with the Erie and in 1907 became special apprentice for that road. He joined the B.&L.E. in 1908 as draftsman and 10 years later became mechanical engineer, which position he held until his retirement.

### ENGINEERING AND SIGNALING

**Henry John Fast** has been appointed engineer maintenance of way of the Central region of the CANADIAN NATIONAL at Toronto, as reported in *Railway Age* July 23. Mr. Fast was born at Puchova, Russia, on February 12, 1913, and received his B.Sc. degree in geology in 1940 from the University of Saskatchewan, after having entered railroad service in 1938 as continental representative of the C.N. in Central Europe, Baltic states and



Henry John Fast

Scandinavian countries. In 1940 he became resident engineer and geologist for the Negus Gold Mines at Yellowknife, Canadian Northwest Territories. In 1941 Mr. Fast was appointed instrumentman; in 1942, assistant engineer; in February 1946, assistant division engineer; and in August 1946, division engineer, all on the C.N. He became district engineer of the Northern Ontario district at North Bay, Ont., in October 1948, which position he held until his recent appointment.

**James C. Bole**, assistant chief engineer of the CENTRAL VERMONT has been appointed chief engineer, with headquarters as before at St. Albans, Vt.

**W. Anderson**, assistant signal engineer on the SOUTHERN PACIFIC at San Francisco, has retired after more than 46 years' service.

**S. P. Berg**, division engineer on the DULUTH, SOUTH SHORE & ATLANTIC, has been advanced to chief engineer, with headquarters as before at

Marquette, Mich. He succeeds **T. Z. Krumm**, who has retired (*Railway Age*, July 30).

**T. Z. Krumm** retired as chief engineer of the MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE on July 21, and was succeeded by **L. V. Johnson**, former district engineer (*Railway Age*, July 30). Mr. Krumm was born at Columbus, Ohio, July 20, 1881, and, shortly after graduating from Ohio State University in civil engineering



**T. Z. Krumm**

in 1902, secured his first railroad job as resident engineer for the Chicago Great Western. Later he served with the Northern Pacific for 10 years and with the Chesapeake & Ohio for two years, and in 1917 went into the U.S. Army as captain of engineers.

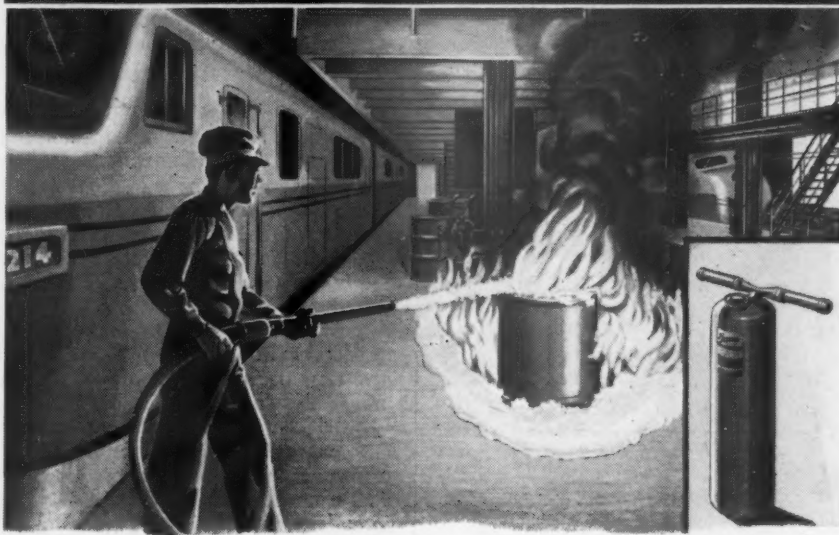


**L. V. Johnson**

Discharged from the Army in 1919, he re-entered the service of the N.P., and acted as assistant on valuation work until May 1920, when he joined the Soo Line's engineering department as principal assistant engineer. He became chief engineer in 1936.

Born at St. Paul on April 26, 1906, Mr. Johnson is an alumnus of the University of Minnesota (B.S.C.E., 1927). He started with the Great Northern as a draftsman in 1927, later served with N.P. for a short time

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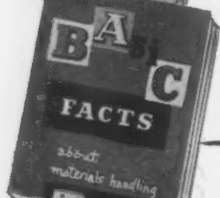
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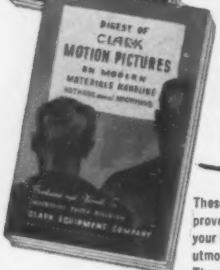
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before accepting a position with the Soo Line as draftsman in April 1928, and progressed through the ranks in the engineering department to become maintenance engineer in 1940. He was granted a leave of absence from the railroad during World War II to serve in the Army as lieutenant colonel, returning to his former post in 1946. Mr. Johnson was appointed district engineer on the Chicago division in 1948.

**Roland Mortimer Hitchcock**, telephone and telegraph supervisor of the CENTRAL OF GEORGIA, has been promoted to the newly created position of superintendent communications, with headquarters as before at Macon, Ga. **Harold Buttelle Hildreth** has been appointed communications engineer.

**W. A. Moore**, superintendent of electric transmission of the NEW YORK, NEW HAVEN & HARTFORD at New Haven, Conn., has been appointed general superintendent of electric transmission and communication. **R. F. Pownall** has been appointed superintendent of electric transmission. Mr. Pownall and **J. D. Rogers**, superintendent of communication, will report to Mr. Moore.

### OBITUARY

**Luther A. Thomas**, who retired on August 1, 1950, as assistant vice-president of the SOUTHERN SYSTEM at Washington, D. C., died on August 4 in a hospital in Asheville N. C., after a long illness. He was 49 years old. A biography and photograph of Mr. Thomas were published in *Railway Age* July 29, 1950, page 58.

**C. S. Kirkland**, who recently retired as general agent, passenger department, of the Northern PACIFIC, at Minneapolis, died on July 31.

**Charles Edward Gay, Jr.**, who retired in July 1950 as president of the SAVANNAH & ATLANTA at Savannah, Ga., died on July 27 at Cromwell, Conn. Mr. Gay was born at Macon Miss., on December 24, 1873, and attended Mississippi Agricultural & Mechanical College. He entered railroad service in March 1898 as roadmaster's clerk with the Mobile & Ohio (now Gulf, Mobile & Ohio). From July 1901 to August 1913 Mr. Gay served with the Southern in various capacities and on the latter date joined the Brinson (Savannah & Northwestern—now S.&A.). In February 1915 he was appointed vice-president and general manager of the S.&A., becoming president and general manager in January 1921. Two months later he was appointed receiver and general manager and in January 1937 became trustee and general manager. In January 1939 he again became president, which position he held until his retirement.

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